

Association between Adolescent Leisure, Peer Social Capital and  
Academic Performance among Canadian Youth

Barbara Szybka, BA (Honours) Community Health

Submitted in partial fulfillment of the requirements for the degree  
Master of Arts in Applied Health Sciences  
(Leisure Studies)

Supervisor: Glenn Stalker, PhD

Faculty of Applied Health Sciences

Brock University

St. Catharines, ON.

Barbara Szybka © February 26, 2009

This thesis is dedicated to my family and friends who have perpetually supported and motivated me through this chapter of my life. I cannot thank you enough for standing by me.

## Acknowledgements

I would like to begin by acknowledging my supervisor, Dr. Glenn Stalker, Assistant Professor at York University and Associate Director at the Institute for Social Research. He supported the exploration of my academic interests and passions without restrictions or limitations. This project would have not been successful without his supervision. Our academic relationship has taught me to embrace challenges and to take initiative.

I would like to acknowledge my committee members, Dr. Trent Newmeyer, Assistant Professor at Brock University who asked the right questions, which guided the direction of my work. I would also like to acknowledge Dr. Jian Liu, Assistant Professor at Brock University, who provided me with invaluable statistical analysis support. As well as very detailed and efficient review of my work that has accelerated the production of my final document.

I would like to acknowledge all of my family and friends who played a significant role in supporting and assisting me in the completion of this study. Your direct/indirect role during the process is the reason why this study was successful.

Lastly, I would like to acknowledge all the Professors, Staff and Students in the Department of Recreation and Leisure Studies at Brock University. The open door policy, research assisting opportunities, casual conversations and social events have truly impacted my growth and development, as well as changed my perspective on many things in life. I cannot thank you enough for contributing to my experience as a graduate student.

## Abstract

Previous research shows discrepant findings between youth leisure programming (before and after school programs, structured summer program, day camp, overnight camp), academic performance and other youth developmental outcomes. Studies underscores the importance of family, community and school social capital in educational success of youth, investigation of peer social capital in the leisure context and academic performance outcomes is limited. This study uses a sample of 10 and 11 year olds (N=1764) from the Canadian National Longitudinal Survey of Children and Youth (NLSCY) Cycle 6, to study the association between youth leisure programming, peer social capital and academic performance. Ordinal logistic regression models consistently showed a positive association between overnight camp and academic performance even after controlling for determinants of health, and measures of family, school and community social capital. Similarly, the measure of peer social capital was positively associated with academic performance. Most importantly, the interaction between overnight camp participation and peer social capital was significantly associated with academic performance. Study findings, highlight overnight camp opportunities and peer social capital in studying academic performance.

## Table of Contents

I. Chapter 1	
1.1 Introduction and Definition of Terms.....	1
1.2 Statement of Problem.....	8
1.3 Purpose of the Study.....	10
1.4 Research Questions.....	10
II. Chapter 2	
2.1 Literature Review and Theoretical Framework.....	13
2.1.1 Academic Performance.....	13
2.1.2 Social Capital Theory.....	14
2.1.3 Social Capital and Adolescence.....	20
2.1.4 Social Capital and Leisure and Intellectual Development.....	22
2.1.5 Variation in Leisure Participation and Benefits of Leisure.....	25
2.1.6 Leisure Program Participation and Academic Performance.....	32
2.1.7 Leisure Program Participation, Academic Performance and Social Capital.....	38
III. Chapter 3	
3.1 Methods.....	44
3.2 Data.....	44
3.3 Measures.....	46
3.3.1 Outcome Variable.....	46
3.3.2 Study Variables.....	47

3.3.3 Analytical Procedures.....	52
IV. Chapter 4	
4.1 Results.....	54
V. Chapter 5	
5.1 Discussion.....	61
VI. Chapter 6	
6.1 Conclusion.....	71
VII. References.....	77
VIII. Tables.....	85
Table 1: Academic performance by household income.....	85
Table 2: Sample characters by age.....	85
Table 3: Sample characteristics by gender.....	86
Table 4: Before/after school, structured summer, day camp, overnight camp program participation by residence, PMK education level, household income....	87
Table 5: Summary of correlations for peer social capital.....	87
Table 6: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending overnight camp during the summer...	88
Table 7: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending structured summer program.....	88

Table 9: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending overnight camp during the summer...	89
Table 10: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending overnight camp during the summer and other control variables.....	89
Table 11: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending before/after school program during the summer and other control variables.....	90
Table 12: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending day camp during the summer and other control variables.....	91
Table 13: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending structured summer and other control variables.....	92
Table 14: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for peer social capital.....	92
Table 15: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for peer social capital and other control variables...	93
Table 16: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for children hanging around kids who re often in trouble.....	93

Table 17: Cumulative Odds of performing well/very well or average academically and cumulative probabilities children who hang around kids who are often in trouble and other control variables.....	94
Table 18: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for the interaction between children who attend summer overnight camp and peer social capital and other control variables.....	95
Table 19: Odds ratio for the effect of overnight camp on academic performance, mediated by peer social capital.....	96
IX. Figures	
Figure 1: Leisure program attendance by percent of well/very well academic performance.....	86
Figure 2: Interaction effect between peer social capital and attending overnight camp last summer on academic performance.....	96
X. Appendixes.....	97
Appendix A.....	97
Appendix B.....	104
Appendix C.....	105



## I. Chapter One

### *1.1 Introduction and Definition of Terms*

Canada is one of the most prosperous nations in the world. It is recognized for its universally accessible health care system and large number of social programs, many of which were developed to help children and youth stay healthy (Leitch, 2007). However, when it comes to health and wellness, Canada's children and youth are doing relatively poor. Among the 29 Organization for Economic Cooperation and Development (OECD) nations, Canadian children and youth ranked 17<sup>th</sup> on behaviors and risks, 18<sup>th</sup> on family and peer relationships, 21<sup>st</sup> in child well-being including mental health and 27<sup>th</sup> in childhood obesity (UNICEF, 2007). Canada is only ranked 12<sup>th</sup> out of the 21 wealthiest countries in the United Nation's ranking of child and youth well-being (Leitch, 2007). The OECD rankings suggest that the environment Canadian children grow and develop in, may not be enriching enough to all children or provide enough opportunities for overall well-being and positive youth development and may be compromising the life chances of Canadian youth.

Statistics Canada defines youth as children 10 – 19 years of age (Kidder, Stein, & Fraser, 2000). Youth is a broad term that may be further narrowed to focus on one particular stage of development, the adolescence. The adolescence stage of development involves biological, social and psychological changes (Shaffer, Wood, & Willoughby, 2005). In 2004, children and youth accounted for 32 percent of all Canadians and 60 percent of those under the age of 25 were young people between the ages of nine and nineteen (CCSD, 2006). Children and youth ages 5-19 spend six hours per day, 180 days per year at school. The remainder hours are discretionary (not including household tasks,

eating and sleeping) accounting for 67 hours per week for 185 days per year (Boys and Girls Clubs of Canada, 2008; Larson & Verma, 1999). As children get older, the discretionary time spent out-side of the home environment increases and thus may become increasingly influential on children's health and developmental pathways (Shaffer et al., 2005) and may provide youth with interactions (positive/negative) with peers, positive/negative challenges or risks as well as adult role models and mentors. Leventhal and Brooks-Gunn (2004) show that the effects and impact of neighbourhood associations seem to be strongest for school-age youth. Discretionary time spent in safe environments that foster positive development may be very important during early adolescence. Inversely adolescent youth who are spending their discretionary time in less favorable environments may be at risk for poor development and should be a concern to society at large.

The World Health Organization defines health as "a state of complete physical, mental and social well-being rather than merely the absence of disease" (Public Health Agency of Canada, 2008). As result of the new definition of health, health promotion was born. The Ottawa Charter defines health promotion as "the process of enabling people to increase control over, and to improve, their health" (Public Health Agency of Canada, 2008). Health promotion consists of multiple strategies that include strengthening community action, developing personal skills, reorienting health services, building healthy public policy, building supportive environments and enabling, mediating and advocating. The aim of health promotion strategies is to improve social environments, integrate social determinants of health with public policy and facilitate community participation (Boyce, Roche, & Davies, 2009).

Integration of social determinants of health with public policy is one of the major goals of health promotion. Health policy can be understood as the action of governments and other players aimed at maintaining or improving a population's state of health. It is a course of action that affects institutions, organizations, services and funding as well as action by public, private and voluntary organizations that have an impact on health (Boyce et al., 2009). Canada's determinants of health consist of income and social status, social support networks, education and literacy, employment and working conditions, social environments and physical environments, personal health practices and coping skills, healthy child development, biology and genetic endowment, health services, gender and culture (Public Health Agency of Canada, 2008). Canada's determinants of health are not specific to adolescent health thus merit the investigation of factors (youth leisure, type(s) of leisure programs) that may extend our knowledge of determinants of health among adolescent youth and open new perspectives for determinants of health that are integrated into policy development or simply to support further investigation.

A source of long term sustainability and competitive advantage of nations depends on young people. Investing in formal education and training of children is key to a healthy and prosperous nation (Leitch, 2007) and is a key determinant of health according to the Public Health Agency of Canada (2008). But what about the remainders of youth time, does leisure time contribute to the education and in turn, the well-being of adolescent youth? And can youth leisure be seen as a major determinant of health among youth?

Youth leisure is commonly defined as out of school time, activities and programs that are discretionary, in other words optional but not necessary or even particularly

important. Negative perceptions of youth leisure stems from ideas that youth leisure time is an opportunity for problem behaviour, a time when youth get in trouble, roam the streets, engage in risky behaviour and watch too much television (United Nations, 2004). Negative views of youth leisure time shape perceptions and are the basis of public policy as well as public attitudes. Reactions and actions to negative perceptions of youth leisure involve preventative measures and restrictions as opposed to proactive approaches, and make it easy for policy makers to cut funding, activities and programs for youth during leisure time. The absence or disappearance of hours, activities and programs for youth would not be noticed by policy makers but would affect young people very much (United Nations, 2004).

Misunderstanding of leisure is also evident in a report by the Public Health Agency of Canada (2008). The agency acknowledges that “youth behaviour involves taking some type of risk” and suggests that “engagement in risk behaviour as essential to maturation and to the development of meaningful relationships with peers” (p. 57). But the agency only focuses on four (negative) risk behaviours. These include smoking, drinking, substance use and sexual activity and factors that manage, mediate or minimize such behaviours, and limit investigation of peer relationships in the school context. If adolescent youth need risk behaviour for healthy growth, maturation and development of meaningful relationships, then there is a need to further investigate positive risk behaviors and the context that can facilitate this process. Lastly, the definition of healthy living for youth must be questioned beyond being physically active and eating a healthy diet. Healthy living for youth must address a more developmentally specific and comprehensive determinants, with a focus on overall and long term quality of life.

Another example of misunderstanding leisure is through negative perceptions of youth leisure. The perception is that youth leisure time is an opportunity for problem behaviour, a time when youth get in trouble, roam the streets, engage in risky behaviour and watch too much television. This creates a negative image of youth, which sees children as potential victims of dangerous adult world, and as young delinquents who pose a danger to others. In situations where youth's test scores go down or family income gets lower or public funds are cut, policy makers, program planners and frequently the public have little doubt about reducing such youth leisure time, programs and activities (United Nations, 2004). The issue presented here is that this mind set is not easily changed and reactions lead to preventative policies rather than proactive programs and services.

Reactions and actions as a result of negative perception of youth leisure involve preventative measures and restrictions as opposed to proactive approaches that promote positive youth development during youth leisure time. According to the United Nations (2004) report "how leisure is perceived makes all the difference" (p. 217). The press and media present youth leisure as a time of risk rather than opportunity, research on leisure focuses on young people's problem behaviour as well as policies and policy debates tend to be framed from a problem-reductions stand point (United Nations, 2004). For example policy commitments in the United States surrounding after-school programs are largely due to reports that juvenile crime rates spiked during the hours directly after-school (American Youth Policy Forum, 2006). As well, evidence from Toronto youth programs and services shows an increase in services and programs that target immediate youth needs as opposed to proactive programs and services (United Way Toronto, 2008).

Viewing youth leisure time as a problem to be fixed ignores the possible positive developmental benefits that may be gained during youth leisure time, resulting in policy response aimed at filling or diminishing leisure (United Nations, 2004). Such responses may include programs that provide little more than basic supervision, longer school days, curfews that keep youth out of the public eye and even investments in facilities for juvenile delinquents (United Nations, 2004). Preventive programs are important but not an adequate goal, youth that are problem free are not fully prepared young people for challenges and responsibilities of adulthood (United Nations, 2004). Rather, proactive approaches are a way of using youth leisure time for constructive development of life skills. Larson (2000) suggests that youth leisure time should be defined as a time of preparation for family life, employment, good citizenship, life long learning and personal fulfillment. Youth leisure should provide opportunities for the development of communities and societies (Larson, 2000).

Evidence is needed to shift public attitudes and perceptions from a negative view of youth leisure to positive vision that emphasizes leisure in its own right. This is a critical first step towards protecting young people's right to leisure and to shape youth leisure policies especially in nations that aim to improve the quality of life of young people. Youth leisure time is to be promoted and protected as a critical space for youth development and the development of their communities. Youth leisure time and opportunities constitute a right to be protected rather than a privilege to be earned or lost (United Nations, 2004). This is consistent with the United Nations Declaration of Human rights which states that "everyone has the right to rest and leisure including limitations of working hours and periodic holiday with pay" (United Nations, 1948). The Sao Paulo

Declaration also stipulates that, "...leisure is the time wherein there is choice limited by certain constraints in which people pursue enjoyable and fulfilling experiences in harmony with society's norms and values that enhance individual and social development" (Sao Paulo Declaration, 1998).

Taking a Positive Youth Development (PYD) perspective when addressing youth leisure will allow us to understand the role leisure plays in developmental outcomes of youth. PYD places emphasis on promoting competencies rather than focusing simply on preventing problem behaviours (Gramzy & Masten, 1991; Benson, 1993 as cited in (Roth, Brooks-Gunn, Murray, & Foster, 1998). This approach views youth as a resource to be developed rather than as problems to be managed (Roth et al., 1998).

PYD is a focus on engagement in pro-social behaviours and avoidance of health-compromising and future-jeopardizing behaviours (as oppose to simply avoidance of health compromising and future jeopardizing behaviours). Young people need access to safe places, challenging experiences and caring people on a daily basis in order to develop on positive life trajectories. In more detail young people need the opportunities for:

Challenging and relevant chances for formal and informal instruction and training, including explorations, practice, and reflection as well as expression and creativity; and new roles and responsibilities, including group membership, contribution and service, and part-time paid employment (Roth et al., 1998)

In addition young people need supports that involve:

Ongoing contact with people and social networks that provide emotional support, such as friendships and nurturance; motivational supports such as high

expectations, standards and boundaries; and strategic supports, such as options assessment and planning, and access to resources (Roth et al., 1998).

Research confirms that that leisure time is important in helping young people achieve broader range of positive outcomes including (United Nations, 2004):

Social/emotional development and engagement: the ability to respond to and cope with both positive and adverse situations, reflect on one's emotions and surroundings, engage in leisure and reflect on one's emotional and surroundings, engage in leisure and fun, and sustain caring friendships and relationships with others" (p. 222)

Vocational development and engagement: acquiring the functional and organization skills necessary for employment, including an understanding of careers and options and the pathways to follow to reach these goals (p. 222)

Physical development and engagement: biological maturation and the evolving ability to act in ways that best ensure current and future physical health for oneself and others (p. 222)

Cognitive development and engagement: the ability to gain basic knowledge, to learn in school and other settings, to use critical thinking, problem solving and creative and expressive skills and to conduct independent study (p. 222)

Civic development and engagement: the growing recognition of one's impact on one's surroundings and responsibility to others as well as the ability and opportunity to work collaboratively towards a common goal (p. 222)

### *1.2 Statement of the Problem*

The majority of the studies that investigate outcomes associated with adolescent leisure programming use samples of children from the United States and may not directly reflect the potential outcomes for Canadian youth. Studies from the United States have shown positive academic outcomes for children who attend after-school programs, especially for children at risk (Klein & Bolus, 2002; Mahoney, Lord, & Carryl, 2005; Welsh, Russell, Williams, Reisner, & White, 2002), suggesting a potential buffering effect of program participation in after-school programs especially among a sample of



children with early signs of risk. Alternatively, some studies found no effect of after-school programs on school grades of participants (De Wit et al., 2006; Mahoney, Parente, & Lord, 2007).

Academic performance/achievement benefits as outcome measures of leisure programs participation among youth are limited to before and after school programs (e.g. De Wit et al., 2006; Kane, 2004; Mahoney et al., 2005; Mahoney et al., 2007; Welsh et al., 2002;). Very little is known about academic performance/achievement benefits from summer leisure programs. Benefits of summer programs/camps have focused on developmental outcomes but failed to investigate the lasting impact it may have on academic performance of youth who participate in summer camp compared to those who do not.

Sun (1999) investigated the influence of residential-based community social capital, Coleman (1988) focused on religious-based and family-based social capital, Eccles et al. (2003) looked at school-based social capital and academic performance of youth. The present study will investigate peer social capital, how leisure opportunities may facilitate social capital and the effect both leisure opportunities and peer social capital have on academic performance of Canadian youth. It is hypothesized similar to the results of Sun (1999), social capital accumulated out-side-the-family, more specifically through leisure opportunities, and carries over to academic performance. It is the aim of this study to fill in the gaps in the relationship between adolescent leisure programming (during the school year and summer), peer social capital and academic performance upon return to school in the fall.

### *1.3 Purpose of the Study*

It is the aim of the present study to extend knowledge regarding the relationship between leisure and academic performance outcomes using a large sample of Canadian adolescent ages 10 and 11 to contribute to a better understanding of youth leisure, to highlight the role leisure plays in the life of adolescence, and to provide evidence for more comprehensive and proactive youth leisure policies.

### *1.4 Research Questions*

Studies of leisure programs as predictors of academic performance mainly focus on the breadth, intensity and duration of participation. There are discrepant findings; some studies show a positive relationship (Klein & Bolus, 2002; Mahoney et al., 2005; Rose-Krasnor, Busseri, Willoughby, & Chalmers, 2006; Tierney, Grossman, & Resch, 1995; Welsh et al., 2002) and others show no improvement (De Wit et al., 2006; Kane, 2004; Mahoney et al., 2007) in academic performance among those who attend such leisure programs. Focusing mainly on the structural aspects of programs may be missing the underlying sources of the benefits of such programs especially the programs that show gradual benefits. Relationship building in leisure environment may be a source of the underlying benefit of participation in leisure programs on the academic performance of the participants. Taking a social capital framework approach as a way of studying the relationship between leisure program (before/after-school programs and summer camps) participation and academic performance of pre-adolescence may yield valuable results.

Studies of social capital's effect on the academic performance of adolescence mainly focus on family, school and local community as the main source of social capital that effects academic performance. No known studies up to date have focused

specifically on leisure programs (after-school and summer programs) as a valuable source of social capital or as a mediating factor of family, school or local community social capital in predicting academic performance. Further, during the adolescence stage of child development the out of home environment becomes increasingly influential (Shaffer et al., 2005), more specifically friends and peers are increasingly more important social agents in adolescence life. Peers may be a great source of social capital, which may act as a resource in academic performance. It is the aim of this study to identify the relationship between family, school, local community, leisure (after-school and summer programs) and peer social capital in predicting academic performance of Canadian youth. The main research questions include:

Q1. What is the relationship between participation in youth leisure programs and academic performance of Canadian youth (10-11 year olds)?

Ho1: Leisure program participation has no relationship with academic performance of Canadian pre-adolescence youth.

Q2. What is the relationship between peer social capital and academic performance of Canadian youth (10-11 year olds)?

Ho2: Social capital generated from peers has no relationship with academic performance of Canadian pre-adolescence youth.

Q3: Does peer social capital mediate the relationship between leisure program participation and academic performance of Canadian youth (10-11 year olds)?

Ho3: Peer social capital does not mediating the relationship between leisure program participation and academic performance of youth.

This study is separated into the following sections, including: (1) introduction to the study; (2) background and theoretical framework; (3) the methodology and analytical procedures; (4) results of the analysis; and (5) a discussion of findings, potential implications and future recommendations. Following Chapter 1, academic performance is presented as the outcome variable and social capital as the theoretical framework is set up with connections made to the main themes (adolescence, leisure and academic performance) of the study. Leisure time is explored and the relationship between out-of-school programs and academic performance is summarized, identifying potential gaps in the literature. A review of literature supporting the inclusion of critical variables is presented. And research questions and null hypotheses are stated.

The next section presents the secondary data description and rationale for micro data access. The limitations of using secondary data as well as the benefits are addressed. This is followed by a description of all measures (outcome, study variables and confounding variables) and details of recoding and the construction of variables. This section also includes a description of ordinal logistic regression, as well as the univariate and multivariate analytical procedures and models. Lastly, the results are presented and significant findings are discussed. And the thesis concludes with implications of the study results and recommendations for future work.

## II. Chapter Two

### *2.1 Literature Review and Theoretical Framework*

#### *2.1.1 Academic Performance*

Becker (1993) states that education and training are the most important investments in children's positive development towards successful adulthood. The knowledge and skills gained through schooling raises earnings and productivity. Education also provides credentials conveying information about the underlying abilities, persistence and other valuable traits of people. In addition to the monetary benefits of education and training, "education promotes health, reduces smoking, raises the propensity to vote, improves birth control and knowledge and stimulates the appreciation of classical music, and literature" (Becker, 1993). Alternatively, under achievement in school is associated with lower annual earnings, low job stability and growth, low social economic status, poor health, depression and over all low quality of life. Performance and achievement in school is a critical component of every child's positive development. Under achievement and performance in academics may be problematic for the well being of children and youth as they grow into adulthood.

Coleman (1988) states that investment in academic development of children and youth not only requires financial capital but also social capital. Social capital functions as an investment into academic performance of children through development of networks, development of trusting relationships, norms of reciprocity and social values that may indirectly promote educational achievement (Coleman, 1988). Social networks allow for sharing of information, resources and knowledge that may not be otherwise available to

the individual(s) in a community. Social capital for youth starts in the family and expands to peers and the community with increasing social environmental opportunity.

Leisure programs provide opportunities for socializing (Shernoff & Lowe Vandell, 2007). Playing, talking and interacting with family members and friends may be among the most important contexts of learning (Larson & Verma, 1999). Socializing can serve as a context for exploring roles, learning cultural norms and developing cognitive, social and emotional self-regulation (Larson & Verma, 1999). Leisure programs can provide involvement in social networks embodying the values of the school through the opportunities for caring, trusting and respectful relationships between youth and adults (Shernoff & Lowe Vandell, 2007). The activity contexts that youth participate in are associated with a distinctive matrix of socialization experiences and opportunities (Larson & Verma, 1999).

### *2.1.2 Social Capital Theory*

The theory of social capital can be introduced in two simple words “relationships matter” (Field, 2008). Field states that by making connections with one another and keeping them going over time, people are able to work together to achieve things that either could not achieve by themselves, or could only achieve with great difficulty. People connect through a series of networks and they tend to share common values with other members of the networks. These networks constitute a resource and can be seen as forming a kind of capital. The formed social capital is useful in its immediate context, and more importantly can be drawn on in other settings (Field, 2003). Social capital in relation to youth leisure and academics can be best understood from the perspectives of Robert Putnam and James Coleman.

Putnam (1995) applies the concept 'social capital' in the framework for understanding civic society arguing that voluntary associations facilitate social integration and civic participation (Putnam, 1993 as cited in Glover & Hemingway, 2005). Social capital can be understood as the networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit (Field, 2008). As children grow into adolescence they voluntarily integrate to form peer groups and participate in community programs and events. The formed peer groups and connections to adults in the community are networks that may be powerful structures for coordination and cooperation towards shared goals and trust.

Alternatively, Coleman (1988) defines social capital by its function. Stating that it is a variety of entities all consisting of social structure, that act as a resource which can facilitate certain actions of actors within the structure. The social structure(s) are opportunities for socialization and development of social norms, rules and obligations that may facilitate individual action. Suggesting that like other forms of capital, social capital is productive, making possible the achievement of certain ends that in its absence would not be possible. Coleman emphasizes closed networks as a feature of social capital. Closed networks based on parent, community and peer connections in a network of mutual obligations and expectations, provide incentives to invest in social relationships based on a trust that other members of the network will reciprocate. Closed social structures develop among parents, community and peers through daily interactions, expectations of each other and towards each other, and through the development of norms about each other's behavior. These types of networks are important for the existence of effective norms and the creation of trustworthiness that allows for the proliferation of

obligations and expectations. Further, social capital in the form of a parents, community and peer groups provides access to the sharing of information and resources, allowing peers to access specialized or privileged information that others have obtained in order to meet developmental challenges. In addition, social norms may encourage peers to act for the group's collective positive development even if the chosen activity does not directly or immediately interest or benefit the individual member.

Smith, Beaulieu and Seraphine (1995) elaborate on Coleman's theory of social capital, particularly on Coleman's points that social capital involves different entities that share "two elements in common: they all consist of some aspect of social structure and they facilitate certain action of actors" (Coleman, 1988). Smith et al. (1995) suggest that social capital includes a structural and a process component. According to Smith et al (1995, p. 367) "social capital's presence is determined by the structure and process of social relations in the family and in the community", when the two components work together an environment for educational achievement can be created.

The structural component of social capital refers to the social setting within which social interactions occur (Sun, 1999). In reference to the family as an example of social structure, the number of siblings in the home, the presence of one or two parents in the household and whether parents work outside the home can influence the process of interactions given that they impact the frequency, duration, density and opportunities for interpersonal interactions between parents and children (Smith, Beaulieu, & Seraphine, 1995). A single parent household therefore presents a "structural deficiency in family social capital" (Coleman, 1988) because social capital can only be accumulated routinely between the child and one biological parent (Sun, 1999). Similarly families with a large



number of children have structural disadvantages because parental resources tend to be diluted among many children in such families (Coleman, 1988).

The process component of social capital refers to the actual and intentional social interactions between parents and children. Social capital is generated by interactions that constrain inappropriate behaviours or facilitate purposive individual behaviours in a manner consistent with the interests of individuals and the community (Smith et al., 1995). The presence of a favorable structure does not automatically translate into process social capital, rather previous studies do show that it usually facilitates actual interactions from which social capital is developed (Sun, 1999). A study of academic performance compared peers in intact families to single and stepparent families, the study results suggest that single and stepparent families involve themselves less in their children's education in terms of interacting with the children, offering general supervision of social activities and monitoring children's school progress. Similarly, a separate study shows that parents with a large number of children have lower educational expectations and interaction less with their children and with other parents, than parents of small families (Downey, 1995).

Stanton-Salazar, (1997) and Stanton-Salazar and Dornbusch (1995) extend Coleman's notion that social capital can be invested outside the family. Social capital outside the family can be manifested in its social network through social ties to other parents, community members and school personnel. The social ties outside the family may accumulate additional educational resources from external sources, especially when within family resources are limited (Sun, 1999). Stanton-Salazar and Stanton-Salazar and Dornbusch acknowledged the importance of family social capital but argue that social

capital is largely embedded in the interpersonal relationships between family members, both parents and children and institutional agents such as teachers, counselors, other parents in local communities, adult friends and colleagues. The institutional agents may be extremely precious assets due to their possession or ability to negotiate access to valuable institutional resources in the form of academic help, appropriate guidance for school programs and information about admission (Stanton-Salazar, 1997; Stanton-Salazar & Dornbusch, 1995).

Coleman (1988) further argues that social capital can be accumulated in a local neighbourhood or a community. A larger pool of material, culture and human resources can be found in a local community compared to the family and in turn may provide educational benefits to all children living in the community. Successful utilization of the collectively owned resources depends on the strength of ties among community members and requires a collective investment in such relationships (Sun, 1999). Interestingly Sun points out that community-based social capital relates to the contextual effect on performance of all students living in the community as opposed to the social capital invested among family members or family social networks which relates to individual student performance. Sun's perspective of social capital as a collective resource and benefit, best applies to the current investigation of the process of social capital accumulation in the during youth leisure opportunities and academic performance of a sample of Canadian youth.

Granovetter's (1973) work can further expand Coleman's theory of social capital, specifically on the significance of networks as resources for the academic performance. The strength of interpersonal ties according to Granovetter (1973 p. 1361) is a

“combination of the amount of time, the emotional intensity, the intimacy (mutual confining), and the reciprocal services which characterize the tie.” Strong ties involve larger amounts of time commitment; “the more frequently persons interact with one another, the stronger their sentiments of friendship for one another are apt to be” (Homans, 1950). Further, Arai (2000) suggests that development of trust (thick or thin) adds to the available social capital. Thick trust occurs in small face to face communities, generated by intensive contact between people (Arai, 2000). And thin trust involves the bonding of people from diverse backgrounds, resulting in social networks that can be described as inclusive. There are social capital benefits associated with development of strong ties as described by Granovetter (1973) and trust as described by Arai (2000). Nevertheless thick trust can also reinforce excessive bonding and may result in exclusion.

In his work, Granovetter (1973) emphasizes the cohesive power of weak ties when discussing the relationship between groups as a way of analyzing segments of social structure that is not easily defined in terms of primary groups. In the context of academic performance, social capital can be accumulated through strong ties in defined groups such as the family, community, schools, out-of-school programs and peer groups. In addition, social capital can be accumulated through weak ties. Weak ties develop through interactions between the strongly tied groups, for example in the interactions between the family and the community or between the family, the community and the school. Social capital can develop through “strong ties” within family, community, school, out-of-school programs and peer groups and through “weak ties” developed in less formal interactions between the family, community, school, out-of-school and peer groups (Granovetter, 1973). In other words social capital accumulates within strong tied

groups but more importantly as Granovetter points out weak ties between the groups allow for greater information sharing and resources, and may be associated with greater levels of social capital that can reach great population levels.

In analysis of processes in interpersonal networks Granovetter (1973, p. 1360) states that weak ties “provide the most fruitful micro-macro bridges”. According to Granovetter, the removal of the average weak ties would do more damage to the transmission probabilities than would that of the average strong one. This means that whatever is to be diffused can reach a larger number of people and traverse greater social distance when passed through weak ties rather than strong. Out-of-school programs may be seen as settings that promote the development of weak ties. According to Granovetter (1973) weak ties may be powerful resources contributing to greater diffusion of information exchange and thus may contribute to academic performance among youth.

### *2.1.3 Social Capital and Adolescence*

During adolescence social capital can be accumulated in the family (Coleman, 1988) and the community (Putnam, 1995; Stanton-Salazar, 1997; Stanton-Salazar & Dornbusch, 1995) but it may also accumulate through peer groups. Beginning in middle childhood and into adolescence peer interactions becomes a very significant component of socialization. Contacts among youth during the middle childhood and adolescence occur more frequently in true peer groups. A peer group refers to a united group that interacts on a regular basis, defines a sense of belonging, formulates its own norms that specify how members are supposed to dress, think, behave and develops a structure or hierarchical organization that enables group membership to work together to accomplish shared goals. Youth identify with their group, and group membership is often a source of

great personal pride. Through peer groups youth are likely to discover the value of team work, develop a sense of commitment and loyalty to shared goals, and a number of other important lessons about how social organizations pursue their objectives (Hartup, 1983; Sherif et al., 1961 as cited in (Shaffer et al., 2005). Peer interaction increase in frequency and duration during early adolescence and may be a vital source of social capital that dictates choices and decisions surrounding academics.

In adolescence, more time is spent with peers, more specifically with small groups of close friends or 'cliques', than with parents, siblings, or any other agent of socialization (Berndt, 1996 cited in (Shaffer et al., 2005). Early cliques usually consist of four to eight same-sex members who share similar values and activity preferences but by mid-adolescence boy cliques and girl cliques begin to interact more frequently, eventually forming heterosexual cliques (Richards, Crowe, Larson, & Swarr, 1998). The cliques often develop distinct and colourful dress codes, dialects, and behaviour that set them apart and help members establish a firm sense of belongingness, or a group identity (Cairns, Leung, Buchanan, & Cairns, 1995).

Further, social development in adolescence leads to development of crowds, this involves merging of cliques with similar norms and values into larger more loosely organized groups. Crowds do not replace cliques but rather membership in a crowd is based on reputation and individual members within a particular clique may even belong to different crowds. Crowds are defined by attitudes and activities their members share, and they come into play mainly as a mechanism for defining an adolescent's place within the larger social structures. Cliques and crowds permit adolescence to express their

values and try out new roles as they begin their journey to develop an identity separate from families.

Adolescence marks a distinct stage in the socialization of children and youth. Social interactions are at the core of social capital accumulation. As adolescents spend more time with peers, friends and others of the same age, accumulating social capital (good and/or bad) from these sources, and may guides their decisions, choices, values and norms acting as a resource that may benefit academic performance. According to Smith et al. (1995) structural factors determine the opportunity for interpersonal interactions as well as for frequency, duration, density of interactions. Leisure programs may serve as structural factors that facilitate interpersonal interactions with adults in the community and between peers in positive environments that may shape youth's norms, values and aspirations (Isreal, Beaulieu, & Hartless, 2001).

Leisure programs may allow children and youth to develop social relationships with peers through interaction in positive and safe environments. Such programs may be a great place for youth to have opportunities and time to develop positive social relationships with peers while participation in an environment that will compliment their development and positive future outcomes. Relationships are important to youth as they get older. Leisure programs may present a positive environment and provide exposure to norms and behaviour that will facilitate positive development of relationships and the accumulation of positive social capital.

#### *2.1.4 Social Capital and Leisure and Intellectual Development*

Aristotle pointed out that humans are social, relational beings (Glover & Hemingway, 2005). According to Hemingway (1996) individuals do not exist in isolation

from history, culture, society or relationships with others. People are attracted to activities and settings that allow for social interactions. Many scholars state that sociability is central component of leisure both structurally and motivationally (Caldwell & Andereck, 1994; Crandall, Nolan & Morgan, 1980, Fine, 1989; Iso-Ahola, 1980; Mannell & Kleiber, 1997; Stebbins, 2002 as cited in Glover, 2005). Since social capital depends on sociability, leisure is the perfect venue for development, blooming and sustainability of social capital in communities (Green & Hains, 2002; Rohe, 2004 as cited in Glover, 2005).

Leisure presents the possibility for informal social interactions and the creation of strong and/or weak ties from which social capital can be generated. Formal organizations are very valuable areas for the creation of social capital. According to Glover (2005) organizational membership promotes 'solidarity' and may be an effective and efficient way of achieving shared civic goals and act as a resource in terms of exchange of information, shared values, norms and networks (Coleman, 1988). The sociability connection between leisure and social capital is the most familiar connection in the area of study. According to Colman (1988) social capital can act as a resource created in one environment but applicable in another. The relationship between leisure and social capital is therefore worthwhile investigating, specifically the potential accumulation of social capital through leisure participation and the effect that it may carry over on to academic performance youth.

Glover (2006) states that while social capital represents a resource embedded in social relationships, access and use of such resources ultimately resides with the individual. According to Glover (2006) social networks have differential access to social

capital; as a result individual returns of social capital may result in uneven distribution. Concentrating on the actual distribution of social capital can produce a better understanding of the relationships developed in leisure contexts and the benefits of accumulated social capital through them (social capital available to adolescence who participate in leisure programs may vary from those who do not).

Glover (2006) emphasized access to resources as fundamental to the presence of social capital. Development of social capital occurs in a variety of social organizations (one-on-one relationships, dyads, voluntary associations) and social networks. According to Glover (2006) social capital developed through leisure activity can be used strategically by individuals to facilitate expressive (e.g. social support) or instrumental (e.g. personal advancement) action.

Vygotsky's Sociocultural Theory emphasizes the role of culture and social context on intellectual development for youth. The focus of Vygotsky's sociocultural theory is on how culture more specifically the beliefs, values, traditions, and skills of a social group is passed on from one generation to the next (Shaffer et al., 2005). Vygotsky views cognitive growth as a socially mediated activity, where children gradually acquire new ways of thinking and behaving through cooperative dialogue with more knowledgeable members of society (Duncan, 1995 as cited in Shaffer et. Al, 2005). According to Vygotsky it was the verbal dialogue with these more knowledgeable members of society that is the key to the development of thought (Shaffer et al., 2005). If sociability is central component of leisure both structurally and motivationally (Caldwell & Andereck, 1994; Crandall, Nolan & Morgan, 1980, Fine, 1989; Iso-Ahola, 1980; Mannell & Kleiber, 1997; Stebbins, 2002 as cited in Glover, 2005) than leisure is the



perfect venue for development, blooming and sustainability of social capital and thus a resources for development of youth (Green & Hains, 2002; Rohe, 2004 as cited in Glover, 2005).

Vygotsky rejected the notion that all children progress through the same stages of cognitive growth. As children master new skills through their interactions with more competent associates are often specific to their culture rather than universal cognitive structures (Shaffer et al., 2005). Thus youth cognitive growth may be compromised if youth lack certain types of leisure opportunities or social interaction during their leisure time compared to those who have such opportunity.

#### *2.1.5 Variation in Leisure Participation and Benefits of Leisure*

Variation in leisure participation can be largely attributed to social economic status, education as well as racial or ethnic origins. Racial and ethnic minorities are under-represented in parks and outdoor recreation areas. Three main hypotheses are proposed in the literature regarding the racial/ethnic variation; marginality, subculture and the discrimination hypothesis. The marginality hypothesis proposes that historic discrimination has left minorities without economic or educational resources to visit parks and related areas. The subculture hypothesis suggests that traditional recreation areas maybe outside the cultural value system of racial and ethnic minorities. Lastly the discrimination hypothesis suggests that overt and/or institutional discrimination may discourage minorities (Stnfield, Manning, Budruk, & Floyd, 2005). Interestingly Carr and Williams (1993) show that much of the variation among the Hispanic population and participation in outdoors recreation is due to inter ethnic differences and patterns. Floyd and Gramann (1993) suggest that the ethnic differences due to levels of acculturation and

levels of assimilation among ethnic groups. Ethnic origin encompassing the norms and pattern of ethnic groups may play a role in outdoor recreation participation, thus it must be accounted for when investigating outcomes associated with participation in outdoor recreation (attending summer camp) among the youth population.

Youth leisure programs can be described as safe, structured programs and services for children and youth in kindergarten through high school, during non-school hours, including before and after-school, school holidays, and during summers and weekends. The range of supervised activities may occur in a variety of settings, including clubs, community-based child and youth serving organizations, schools, libraries or parks (Boys and Girls Clubs of Canada, 2008). Opportunity to participate in leisure programs yields multiple benefits for youth.

Benefits gained from participation in community-based programs encompass a range of positive outcomes for youth, including increased confidence and connection, stronger character, more caring, compassionate, and competent individuals (Lerner, Fisher, & Weinberg, 2000; Roth et al., 1998). By filling in the gaps missed by families and schools, leisure programs may complement families and schools in fostering positive development of youth, providing opportunities and resources that some youth may not otherwise be exposed to may buffer out negative the lack of opportunities or resources at home or school. Leisure programs emphasize supporting the socialization and healthy development of young people through the promotion of positive development, nurturing relationships, and a challenging environment while viewing and treating young people as a resource (Boys and Girls Clubs of Canada, 2008; Lerner et al., 2000; Roth et al., 1998).

Many after school programs are designed to simply keep youth busy during the hours they are most likely to get into trouble, as opposed to providing a more enriching environment that fosters positive youth development (Boys and Girls Clubs of Canada, 2008). After school programs claim to provide relationship-based activities that assist young people to be active and healthy and to have access to caring adults who can provide the support they need to succeed (Lerner et al., 2000). Youth who actively participate in after-school programs are more likely to exhibit holistic healthy benefits including physical, emotional and social well-being. In addition, active children are less likely to commit crime, are more likely to stay in school and succeed later in life (Boys and Girls Clubs of Canada, 2008). Later in this chapter, review literature shows discrepant evidence regarding academic benefits associated with participation in after school programs.

After-school programs provide benefits to individuals, schools and communities. The benefits gained from investing in after-school opportunities for children and youth include a healthy future generation, confident and thoughtful citizens, who have a better self-esteem, can work as a team, have confidence, a sense of curiosity and a life long love of learning (Boys and Girls Clubs of Canada, 2008). According to the American Youth Policy Forum (AYPF) after-of-school programs add productive time to the day and year for young people to develop a variety of important skills, to supplement academic learning to connect with caring adults and to support their healthy development (American Youth Policy Forum, 2006; Witt, 2004). More benefits associated with participation in after-school programs include an increase in additional academic achievement, school attendance, time spent on homework and extracurricular activities,

enjoyment and effort in school and better student behaviour (Anderson-Butcher, Newsome, & Ferrari, 2003). Further, after-school programs are supportive context for youth development and offer excellent opportunities for youth to develop skills in supervised, safe and engaging environments (American Youth Policy Forum, 2006).

Benefits associated with participation in after-school programs go beyond school success, it is a time where youth can be engaged in positive activities and be distracted from participation in crime, accidents and use of tobacco, drugs or alcohol and are less likely to get pregnant (American Youth Policy Forum, 2006). According to the US Department of Education, adolescent who are unsupervised during the after-school hours are 37 percent more likely to become teen parents (American Youth Policy Forum, 2006). In addition, older teens can benefit from participation in after-school programs by creating connections with caring adults and community members, develop a greater sense of meaning and place in their immediate environment (American Youth Policy Forum, 2006). Other youth leisure programs such as summer camps were first introduced in North America in the 1880s due to the “back to nature trend”. Camps were an extension of school for the more privileged, and predominantly white youth (Van Slyck, 2006). Later, overnight camps were seen as a place outside the home that catered exclusively to youth to protect them from the moral and physical degradation of urban life, evils to which youth were taught to be particularly prone. At the same time camps became more accessible and available to youth in the middle class as well as to those living in poverty through such organizations as the YMCA and Boys and Girls Guides (Van Slyck, 2006). At the beginning and as they evolved summer camps blended prevention and positive youth development in an informal way (Thurber, Scanlin, Scheuler, & Henderson, 2007).

Summer leisure experience(s) for youth may include participation in structured summer programs, day camps or overnight camps. Headlines such as “Better Camping for All” from more than 100 years ago to current tag lines including “Camp Gives Kids a World of Good” and “Enriching Lives, Building Tomorrow” point to the purpose of camp (Henderson, Bialeschki, & James, 2007). Summer camps can be seen as opportunities to teach youth in ways that schools could not (Thurber et al., 2007). Where youth learn how to live independently within a community; youth are away from home, in some cases for the first time. Larson (2000) characterizes camps as ideal for positive youth development, stating that camps are intrinsically motivating, structured voluntary activities with lots of opportunities to take initiative, challenge, risk, and develop mastery. According to Van Slyck (2006) camps are seen as a place without adult supervision, a place for innocent play that is joyful and spontaneous and not dependent on consumer goods. Camps are also place for development of social capital and citizenship (Yuen, Pedlar, & Mannell, 2005).

Paris (2008) describes the summer camp experience as “group living away from parents but under adult guidance, outdoor activities, regular evening campfires, a great appreciation of the natural world and a test of skills and independence” (p. 12). When asked about their experience at summer camp, “Are there ways you are different now because of what you learned at camp or did at camp?” youth participants responded by stating that “I am a lot more caring”, “I am not as shy as I was before”, “I am a different person with a more positive attitude”, “I am more confident in doing new things” and “My social skills are better” (Bialeschki, Henderson, & Penny, 2007). The experience of summer camp can be seen as revelatory, formative and transformative (Paris, 2008). It is

important to acknowledge that not all camp experiences are good (Bialeschki et al., 2007; Paris, 2008), some youth have a negative experience at camp, which may be due to homesickness or exclusion.

According to Henderson, Thurber, Schueler Whitaker, Bialeschi and Scanlin (2006) camps provide an intense experience for youth, through interactions with adults and peers while participating in activities that are structured and often new and different. Summer camps are a setting for “holistic experiences including physical exercise such as hiking; mental challenges, such as cooperative problem solving; social skills development such as making friends from different backgrounds and spiritual events; such as outdoor worship” (Thurber et al., 2007, p.242). Henderson, Scheuler Whitaker, Bialeschi, Scanlin and Thurber (2007) show that campers gained highest effect size related to adventure/exploration, independence, making friends, positive identity and peer relationships.

Summer camp offers opportunity for intergenerational negotiations, freedom, adventure, self-exploration and self-determination (Paris, 2008). Participation in intergenerational community (interactions between peers and camp leaders) is the central theme of camps. More importantly, participation is not passive rather youth desires are considered for the camp to be successful (Bialeschki et al., 2007; Paris, 2008). Camps are a place to teach youth social acculturation and good citizenship (Paris, 2008). Camps are places where youth can build skills and bond with peers and adults (Bialeschki et al., 2007). Summer camps also offer interventions in that camp staff members are trained to help youth change in positive ways (Bialeschki et al., 2007).

The pre-adolescent stage of youth development is characterized by milestones in the development of self and social cognition including identity development through building self-concept and self-esteem, self-control and social cognition (Shaffer et al., 2005). Self-concept and self-esteem is based on one's academic, physical and social competencies and begins to progress towards friendships and job competencies. Self-concept at this stage of development reflects one's values and ideologies. Self-control reflects individually generated strategies to regulate conduct and internalize norms that stress the values of self-control (Shaffer et al., 2005). Social cognition, the last hallmark of development among 10 and 11 year olds highlights impressions that are based on the traits other's display (psychological constructs and comparisons) and friendships that are based on psychological similarities, mutual trust, loyalties and sharing of intimacies (Shaffer et al., 2005).

Youth development outcomes as a result of camp experience(s) show comprehensive benefits. Groves and Kahalas, (1976) and Marsh, Richards and Barnes (1986) showed that youth experienced positive self-concept during participation at camp. Treasure and Roberts (1998) showed that youth developed healthy beliefs about effort and mastery. Cartwright, Tabatabai, Beaudoin and Daidoo (2000) (Garst, 2005) showed self-actualization as a benefit of summer camps. As well, Garst and Bruce (2003) concluded that camp teaches youth to make thoughtful decisions, use resources wisely, be responsible citizens, accept differences, be respectful towards others and to be positive leaders. Further, Thurber et al. (2007) reported significant growth in positive identity, social skills, physical and thinking skills and positive values and spirituality for children ages 8 to 14, who spent a week or more at camp. Follow-up six months later also showed

persistent outcomes (as observed by the parents) for positive identity including self-esteem, and independence, social skills such as leadership, friendship skills, social comfort and peer relationships. Positive outcomes also persisted in the physical and thinking skills domain including adventure and exploration and environmental awareness, as well in positive values during decisions making.

Summer camps have abundant developmental benefits. Nevertheless, there is a lack of research that investigates the benefits of attending overnight camp during summer and the lasting effect in other settings such as the school upon return in the fall, apart from Dimock and Hendry (1929) and Henderson et al. (2007) and Thurber et al. (2007) who identified non-academic outcomes that persisted beyond the summer camp environment. This hints at the potentially long lasting benefits of attending summer overnight camps in the context of academics. Bialeschki et al. (2007) states that “what happens at camp is expected to have some type of carryover into life beyond the time spent at camp” (p.774).

#### *2.1.6 Leisure Program Participation and Academic Performance*

Tierney, Grossman and Resch (1995) evaluated the impact of participating in the Big Brothers/Big Sisters program among a sample of 959 youth. The results of the report show youth who participate in the BB/BS program received higher grades, skipped half (52 percent) as many days of school, cut fewer (37 percent) classes and felt more competent about doing their school-work. The Big Brothers/Big Sisters group reported three percent better grades compared to the control group, on average reported a GPA of 2.71 compared to 2.63 respectively. Further, girls participating in the Big Brothers/Big Sisters program showed even greater gains compared to the control group, averaging



GPA scores of 2.83 compared to 2.67 in the control group. In addition girls showed even greater school attendance; skipping 84 percent fewer classes and skipping 78 percent fewer days compared to the control group of girls.

A study similar in design to Tierney et al (1995) has never been conducted in Canada, and only a pilot study has made an attempt at evaluating the outcomes of Canadian youth participating in the Big Brothers/Big Sisters program (De Wit et al., 2006). An experimental design study consisting of a sample of 71 families with children ages 7-14 years were randomly assigned to: the experimental group comprised of families with children matched to an adult mentor or to a control group comprising of families participating in a waiting list program of recreational and educational activities. The evaluations procedures involved a pre-questionnaire (administered prior to group assignment) and a follow-up questionnaire 12 months later. In addition face-to-face interviews were conducted with the children, parents and adult mentors. Measures chosen to evaluate included child behaviour, depression, academic performance, self-esteem, social support, social skills, quality of relationships, and coping skills. Unfortunately tests of equivalence revealed non-significant group differences on most baseline outcomes, this may be due to a too short of follow-up period. Previous studies identified significant improvements/differences among youth who participate in after-school programs only after one to two year follow-up (Mahoney et al., 2007; Welsh et al., 2002).

Mahoney, Parente and Lord (2007) assessed differences in after school program engagement in relation to child school grades and other competencies including social competence and effect motivation. A sample of 141 children; average age 8.4 years old who attended nine after-school programs in urban, disadvantaged cities in the US were

assessed in the two year study. Key results indicate that program engagement was not significantly associated with school grades as measured through student academic records. Insignificance of a relationship between after-school programs and school grades may be due to the short time span and a sample limited to children attending the after-school programs during the spring of one school year (Mahoney et al., 2007).

Mahoney, Lord and Carryl (2005) conducted a study looking at after-school program participation and the development of academic performance for disadvantaged children. The researchers studied 599 boys and girls. The age range of the participants was 6.3 to 10.6 years old from an urban, disadvantaged city in the US. The ecological analysis involved a comparison of academic performances across four patterns of after school care including after-school programs, parental care, combined parent/sibling care, and combined other-adult/self-sibling care. Results of the study indicated that children who attended after-school programs showed significantly greater academic performance compared to children in the other three groups. More specifically, the significant differences were seen among children who rated high on engagement in the after-school program activities (Mahoney et al., 2005).

A study conducted in part with The After-School Corporation (TASC); an organization intended to provide support for programming to enhance the availability and quality of after-school opportunities for children and youth in New York City and statewide. The study aim is to evaluate the education-related characteristics and changes affecting students in grades K-8 (Welsh et al., 2002). Analysis included students who participated in this project during the first three years of operation (1998 – 2001). The sample of students demonstrate high levels of educational risk, in terms of poverty,

baseline achievement and status as English Language Learners and recent immigrants, from the school system's most disadvantaged locations. Student's attendance increased by the median days attended from 80 to 99 to 109 in the three years respectively. More importantly, among the students who attended a TASC program in its first year, 46 percent continued to attend the second year and 48 percent of the second year students continued to participate in year three.

Results of the Welsh et al. (2002) study indicate that students who participated in the TASC project for more than a year showed significantly greater gains on citywide math tests than did similar non-participating classmates. Further, students who participated in the after-school activities most consistently and for the longest period of time, experienced the greatest math gains relative to their peers. In fact students participating for two, three years gained an average four/six scale-score points higher, respectively, than non-participants. Highlights of the study indicate benefits of participating in after-school programs emerge gradually and participating in TASC shows greatest benefits to students who are at the greatest academic risk. Further, participation in the after-school program is associated with significant gains in school attendance.

Kane (2004) studied the impact of four after-school programs: 21<sup>st</sup> Century Community Learning Centers (21<sup>st</sup> CCLC), The After-School Cooperation (TASC), Extended-Service School Initiative (ESS) and the San Francisco Beacons Initiative (SFBI). In brief all of the programs followed the standard model, the typical after-school program included in the evaluations operated for two to three hours at the end of the regular school day, four to five days per week. During the two to three hours programs students were expected to work on their homework, had opportunities to participate in

organized games, athletic activities, attend presentations by local community groups or training in personal skills such as leadership or conflict resolution. The average ratio of adult to student was 1 to 11. The programs were typically located in neighborhood schools with a high concentration of disadvantaged students.

Study results indicate consistent outcomes across several of the evaluations showing that after-school programs promote greater parental involvement in school, greater student engagement and greater student commitment to homework (Kane, 2004). Nevertheless, the results showed no statistically significant impact on achievement test scores after one year of participation. Further, as indicated by Welsh et al. (2002) and similarly highlighted in the work by Kane (2004) positive impact on math performance was reported after participation in the TASC after-school program for two and three years.

A report by Klein and Bolus (2002) compared improvements in math and reading scores of students (grades 1-5, low SES) who did and did not participate in the Foundations' after school enrichment program, during the 2001-2002 school year. The Foundation's program provides children with daily opportunities emphasizing academic, physical and emotional development. In addition students participate in other activities such as field trips and homework assistance. The student to adult ratio is on average ten to one, and all staff members have experience working with school children, including certified teachers and other professionals. The program emphasizes family involvement and promotes family participation and communication. Results of the study show that the effect of the Foundations' program was about twice as large as it was compared to non-Foundations students. More specifically, the effect size for Foundations and non-

Foundations students were .91 and .52 in math and .76 and .35 in reading, respectively.

Other potential benefits of participation in the program include social relations and attitudes towards school (Klein & Bolus, 2002).

Rose-Krasnor, Busseri, Willoughby and Chalmers (2006) conducted a study of breadth and intensity of youth activity and involvement as context for positive development. The researchers used a sample of 7430 Canadian born youth to examine breadth and intensity of youth activity involvement in relation to risk behaviour involvement, psychological functioning, academic orientation and interpersonal functioning. Results showed that the number of activities that children were involved in predicted risk behaviour, more specifically lower levels of breadth were associated with less risk behaviour. Breadth and intensity were also predictors of psychological functioning. Most positive levels of psychological functioning were found among those reporting high breadth and high intensity of involvement. Further, breadth and intensity predicted academic orientations, this relationship was strongest at lower levels of breadth. Overall the key findings from the study suggest that benefits of diversity of activity may have its limits, in other words participation in more activities may not carry additional benefits (Rose-Krasnor et al., 2006).

Existing literature shows discrepancies in the academic outcomes of children and youth participating in out-of-school programs and is limited to after-school programs excluding participation in community programs during the summer. Participation in youth programs during the two months during the summer may have a significant effect on the academic performance of pre-adolescent youth. Further, the majority of studies (De Wit et al., 2006; Kane, 2004; Klein & Bolus, 2002; Mahoney et al., 2005; Mahoney

et al., 2007; Welsh et al., 2002) simply focus on a dichotomous (did/did not participate) evaluation of after-school program participation effect on academic achievement with little focus on social environmental influences (interpretation of results based on the theory of social capital) in the out-of-school settings effect on academic outcomes.

There is very little known about outcomes of participation in after-school programs among Canadian youth, with the exception of the study of breadth and intensity of activity involvement (Rose-Krasnor et al., 2006), which also followed the trend of program evaluation without accounting for the social influences (social capital: norms, trust, networks, information exchange and social economic status) especially the social influences out-side the home, which are critical during adolescent (Shaffer et al., 2005). Nevertheless, past results may hint at potential social influences of such programs. In the study of breadth and intensity of participation in after-school programs Rose-Krasnor (2006) shows that low breadth of program participation is associated with higher academic performance and lower risk behaviour, these results may suggestive of stronger ties that develop between the participants and the leaders, who over time become mentors and resources of information, norms and support that benefits academic performance. The same may be suggested by studies (e.g.. Welsh, 2002) that shows academic performance benefits associated with after-school program participation only after one year (2 to 3 years) of participation.

#### *2.1.7 Leisure Program Participation, Academic Performance and Social Capital*

Coleman (1988) looked at the influence of social capital within the family and outside the family on educational performance of adolescents. The density of parent-child interactions measures social capital accumulated within the family, factors that are related

to such interactions include family structure, number of siblings and mother's expectations for the child. High-frequency of long-duration of parent child interaction, the physical presence of both biological parents in the household and small number of siblings increase the chances of a student finishing high school. Further, Coleman looked at the influence of local community in this case religious affiliation and the academic performance of students. Results of the study concluded that Catholic school students typically outperformed their public school peers because social bonds in Catholic communities are much stronger.

Sun (1999) examined the relationship between social capital accumulated in a local community and the academic performance of all students living in the community. Using a US nationally representative sample of grade eight students, Sun looks at the relationship between community structural variables (average number of school changes, average sibling size, concentration of non-traditional families), process variables (percent of students participating in religious activities, percent of students belonging to organizations, extent of parental acquaintance and parents working together), and control variables (average family income, percent of students in free/reduced lunch programs, percent of minority enrollments, percent of limited English proficiency, school enrollment, urban, suburban) and their effect on academic performance (science, math, reading and social studies scores). Sun (1999) underscored the importance of community based social capital in studying academic performance, suggesting that just as within family, tight interpersonal ties within the community also enhance academic performance.

Results from the individual/family hierarchical linear model showed that greater number of siblings in the household was negatively associated with academic performance (Sun, 1999). Similarly school change was negatively associated with academic performance. Alternatively positive associations were found between parent-child communications, parents belonging to organizations and students' participation in religious activities. Further, family income and parental educational attainment were positively associated with the four test scores. Gender differences were also significant, females underperformed males on science, math, and social studies but females scored higher on reading.

Net results of the community-level equations after adjusting for all individual level variables include an underperformance among students living in communities that frequently move and those large and non-traditional families (structural measures). A mediating effect of community control measures was observed reducing the effect of average number of sibling and the concentration of non-traditional families on academic performance by more than half (Sun, 1999). Further, community process measures were associated with higher academic performance and had a mediating effect on the structural measures on academic performance (Sun, 1999). In summary, community level analysis shows that measures of structural and process community social capital had a moderate but statistically significant contextual effect on academic performance. Both control and process variables mediated the effect of structural effect on performance.

Further analysis looked at whether the relationship between community structure and academic performance varied according to the level of process social capital accumulated in the community. Results indicate that the educational disadvantages of



living in communities with high concentration of large and non-traditional families would be reduced by a small but statistically significant extent if members of the community could actively engage in community-based activities (Sun, 1999). This may be due to the routine and direct interactions between community members (Sun, 1999) and may be predictive of the effect of youth participation in out-of-school programs. The routine and direct interactions that may take place during participation in out-of-school programs may result in positive effect on academic performance of children and youth.

Eccles, Barber, Stone, Hunt, (2003) conducted a study using the Michigan Study of Adolescent Life Transitions (MSALT) longitudinal data that began in 1983. The researchers investigated the association of participation in school-based extracurricular activities and developmental indicators. The study results indicated that participation in extracurricular activities during high school years provides protective context in terms of involvement in risky behaviour and promotion of academic performance. Next, the researchers investigated whether or not participation in activities link adolescents to certain types of peers. It was proposed that adolescents spend a lot of time in activity settings with the other participants and it is likely that one's friends will be drawn from the other participants. In addition, it was the collective behaviours of this peer group that influenced each member, participants in service and religious activities predicted lower rates of drinking and drug use, and participants on school sport teams predicted better educational outcomes, but higher rates of drinking (Eccles, Barber, Stone, & Hunt, 2003).

South, Baumer and Lutz (2003) examined factors that explain the higher rates of school dropout and lower rates of high school graduation in social economically distressed communities. Using longitudinal data from 1, 128 US respondents in the

National Survey of Children the authors found that one third of the observed positive effects of community social economic disadvantage on high school discontinuation can be explained by the educational behaviour of peers (South, Baumer, & Lutz, 2003). Similarly to Sun (1999) residential mobility had a small impact on youth educational attainment, and the youth's educational aspirations also had small impact. In addition, mediating effect of attachment to school and parents and parental control over adolescent behaviour had little impact of community disadvantage on high school drop out and graduation. The results of South et al (2003) study as well as Eccles et al (2002) highlight the importance of peer effect on academic performance of youth at risk.

Israel, Beaulieu and Hartless (2001) investigated the influence of family and community social capital on educational achievement. Using data from the US National Education Survey from grade eight students with a final sample size for three measures of educational achievement that includes composite test scores, grade point average, and staying in school. Key results of the study indicate that both process and structure attributes of family and community social capital affecting high school student's educational achievement. Statistically significant variables effecting educational achievement include number of siblings, which shows to have negative effect on educational achievement. Further, discussion of school matters with parents has a significant positive effect on educational achievement. The amount of time a child spends alone after school with no adult supervision is also a significant factor in educational achievement, the more time spent unsupervised the lower the scores on math/reading tests. Community social capital variables that were significant include social economic capacity, which has a positive effect on student's test scores. Further children who's

parents know parents of their best friend obtained higher scores, higher grades and stayed in school. As indicated in the work of Sun (1999) and Isreal et al. (2003) youth involvement in religious groups tends to enhance their educational achievement.

### III. Chapter Three

#### *3.1 Methods*

#### *3.2 Data*

Micro data of the Canadian National Longitudinal Survey of Children and Youth (NLSCY) Cycle 6 was used in this study to investigate the relationship between leisure, social capital and academic performance of ten and eleven year old Canadian youth. The NLSCY is available in public user format only up to cycle three. Due to attrition (a cumulative effect of non-response), respondents may be easier to identify, as a result Cycles 4 and up are only available in master files. The master data files are accessible at Research Data Centers (RDC), which requires an application process.

The NLSCY began in 1994 and is jointly conducted by Statistics Canada and Human Resource and Social Development Canada (HRSDC). NLSCY is a long-term study of Canadian children that follows their development and well-being from birth to early adulthood (Statistics Canada, 2006). Each cycle of the survey collects information about factors influencing a child's social, emotional and behavioural development, with the aim of monitoring the impact of these factors on children's development over time. In addition, the survey covers a range of topics including health of children, information on their physical development, learning and behaviours, as well as data on their social environment including family, friends, schools and communities (Statistics Canada, 2006). The sample population consists of a non-institutionalized civilian sample of children from Canada's ten provinces. The survey excludes children living on Indian reserves or Crown lands, residents of institutions, full-time members of the Canadian Armed Forces and residents of some remote regions (Statistics Canada, 2006).

The NLSCY is a sample survey with a longitudinal design, consisting of several cross-sectional and longitudinal samples. The longitudinal sample at Cycle 6 totals roughly 26000 children and youth (including non-respondents), representing the original longitudinal population sampled at Cycle 1 in 1994, with a total response rate of 83.8 percent. The original longitudinal sample at Cycle 6 consists of children aged 10-21 (Statistics Canada, 2006). The sample of 10-11 year olds at Cycle 6 will be used in the secondary analysis of data in order to answer the proposed research questions surrounding leisure, social capital and academic performance.

Responding to the NLSCY survey is voluntary and consists of many components including the child component for those younger than to seventeen years of age. For this component the respondent is the person most knowledgeable (PMK) about the child. There is also an adult component to which the PMK responded. Lastly, the survey consists of a youth component for youth ages sixteen and older, to which the youth respond. Furthermore, cognitive tests are administered including mathematics, problem solving, literacy and numeric assessments. The NLSCY provides weights for point of estimation. Unfortunately only cross sectional weights are available for specific age group that excluded the age group of this study. Therefore, the data used in this study represents a sample of 10 and 11 year olds from Canada's ten provinces.

Secondary data used in this study limits the research and analysis to the items in the original NLSCY cycle 6 questionnaire including the age of the children and youth, the specific questions asked at each age and the answers of the PMK about the child. In particular this study is limited in the ability to identifying networks of strong and weak ties in the analysis of the NLSCY cycle 6. In this study the measure of social capital is limited to participation in social institutions, organizations, programs or camps, but

according to Glover (2006) social capital is not just about social networks rather social capital can also be acquired from participation in social organizations. Benefits of using secondary data include a national representation of children and youth in Canada. In addition the survey is administered and secured by Statistics Canada, this allows for greater confidentiality and thus the potential for more accurate answers to the question in this survey.

The development of this thesis drew upon published literature to develop logical models based on previous work as well as logical assumptions about out-of-school programs based on the results of previous work. For instance assumptions of out-of-school program characteristics including the goals, norms and objectives of such programs is base on previously published work (De Wit et al., 2006; Kane, 2004; Mahoney et al., 2005; Mahoney et al., 2007; Roth et al., 1998; Tierney et al., 1995). Logical assumptions regarding the structure and process of social capital measures in relation to out-of-school programs were also drawn from past literature (Arai, 2000; Cambell, Wood, & Kelly, 1999; Carlson & Chamberlain, 2003; Coleman, 1988; Field, 2008; Furstengerg Jr. & Hughes, 1995; Glover, 2006; Glover & Hemingway, 2005; Goddard, 2003; Sun, 1999).

### *3.3 Measures*

#### *3.3.1 Outcome Variable (DV)*

The main interest of the proposing study is academic performance of pre-adolescent (10 – 11 year olds) males and females. Academic performance will be used as

a measure of the overall acquisition of skills, knowledge, competence and capabilities of youth.

**Academic performance:** will be based on the answers of person most knowledgeable (PMK) of the child's overall school work as questioned in the NLSCY Cycle 6: "based on your knowledge of his school work, including his report cards... how is he doing overall?" The response of the child's overall academic performance ranges from 1=very well, 2=well, 3= average, 4=poorly, and 5=very poorly. For the purpose of this study the measure of academic performance will be ordered by grouping 1= well/very well 2=average 3= poorly/very poorly.

### *3.3.2 Study Variables*

Colman (1988) defines social capital by its function; a variety of entities all consisting of social structure which can facilitate certain action of actors with in the structure. Social Structures according to Coleman are opportunities for socialization and development of social norms, rules and obligations that may facilitate individual action. Smith et al. (1995) extends Colman's definition, suggesting that development of social capital includes a structural and process components. The structural component of social capital refers to the social settings with in which social capital occurs. The process component of social capital refers to the actual and intention social interactions.

#### **Family Social Capital**

The structure component of social capital was used to measure family social capital. Family social capital was assessed based on responses the following questions in Cycle 6, include the two original measures of family social capital that Coleman (1988) used in his original study and in subsequent study by Sun (1999). The following items will included:

**Non-traditional family structure:** “Child lives with?” the answers include 1=both biological parents, 2=one biological parent, 3=does not live with a biological parent, 4=youth is living independently. This item was coded as 1=both biological parents, 0=other.

**Number of siblings:** “The total number of siblings of the selected child living in the household at the time of interview (full, half, step, adopted and foster siblings and excluding the child himself). This includes siblings of all ages.” The answers are on a continuous scale ranging from 0 to 8 siblings. This item was coded as follows 0=0 siblings, 1= 1 sibling, 2=2 siblings, 3=3 or greater.

### **School Social Capital**

Due to limitations of secondary data used, the school social capital was measured with a focus on the structural component of social capital. The following question from Cycle 6 of the NLSCY were used to measure the school as a social setting within which social interactions occur:

**Type of school:** “what type of school is this child currently in...is it a... 1=public school 2=catholic school, 3=not in school, 4= taught at home, 5=private school, 6=child in an institution, 6=other”. Selection of this particular question is based on Coleman’s original work, which identified catholic schools as having greater social capital compared to public schools. Therefore this variable will be recoded to create a dummy variable with 0=other, 1=catholic school.

### **Leisure Social Capital**

The structural component of social capital were used to measure the adolescent leisure programming social capital. The following variables were used to measure adolescent



leisure program settings within which social interactions occur. The following questions were used from NLSCY Cycle 6:

**Before/after-school program:** “While you (and your spouse/partner) are at work or studying, do you currently use care in before or after school program?” 1= yes 0 = no.

**Summer structured program:** “Last summer while this child was not in school, what type of child care arrangement did you use while you (and your spouse/partner) were at work and/or studying... structured summer program?” 1= yes 0 = no.

**Overnight camp:** “Did this child attend an overnight camp last summer?” 1= yes 0 = no.

**Day camp:** “Last summer, did this child attend day camp or recreational or skills building activities that ran half days or full days (for example music program, reading program, athletic program?” 1= yes 0 = no.

### **Peer Social Capital**

Alternatively, to the measures of family, school and adolescent leisure social capital, the measure of peer social capital was developed based on the process component of social capital. Peer social capital was measured using actual and intentional social interactions between peers. The following questions were used from NLSCY Cycle 6:

**Around kids often in trouble:** “How often does this child hang around with kids you think are frequently in trouble?” The response includes 1=often, 2=sometimes, 3=seldom, 4=never?”. This variable was recoded by combining categories 1=often, 2=sometimes 3=seldom/never.

**Adolescent Peer social capital:** “How often would you say that this child..., helps other children (friends, brother or sister) who are feeling sick?”, “...offers to help other children (friends, brother or sister) who are having difficulty with a task?”, “...comforts a

child (friend, brother or sister) who is crying or upset?”, “...will invite others to join a game?”, the response to the questions above is based on a three point scale: 1=never or not true 2=sometimes or somewhat true 3=often or very true. Spearman correlation was conducted on the above questions, and Cronbach alpha will be evaluated. The answers from the four above questions will be added to create the ‘peer social capital’ variable. As the values of peer social capital variable increase as the value increases, peer social capital increase.

### **Determinants of Health (Confounding Variables)**

A way to control for variables that may account for the effects on the dependent variable is to include suspect variables such as PMK income, education, immigrant status, and size area (urban/rural) of residence into the model. The demographic variables listed above have been controlled for and/or have been shown in to literature to have a relationship with the dependent variable. Therefore these variables must be added to the proposed models.

**Household income.** The income variable used to the following questions from the survey: “What is your best estimate of your total household income from all sources in the past 12 months (that is the total income from all household members, before taxes and deductions)?” The responses ranged from 6000 to 936600. The income measure was recoded as follows 1=<20,000; 2=20, 200- 40,000 3=40,200-60,000; 4=60,800-80,000; 5=80,008-100,00; 5 is >100,000. Due to disclosure guidelines of the NLSCY Cycle 6, the income categories were merged in instances where cell count was less than fifteen subjects.

**PMK education.** To control for the education of the PMK the education variable will be constructed using the following question from the survey “highest level of schooling obtained?” The response included 1=less than secondary; 2=secondary school graduation; 3=some post-secondary; 4=university or college; 5=other.

**Area of residence.** To control for the potential effects of variation in rural versus urban living on the child’s educational performance, the area of residence will be included in the model. Using the following question from the NLSCY Cycle 6: “Size of area of residence in which the child lives, according to the 2001 Census counts.” The possible responses included 1=rural area, 2=urban, population <30000 3=urban, population 30000 to 99999 4=urban, population 100000 to 499999 5=urban, population 500000 and over.

**Gender.** The following question from the NLSCY Cycle 6 was used for the gender variable: “gender of the child”. The response is F=female, M=male. Recoded to 1=female; 0=male.

**Relocation:** “Aside from school changes, since the last interview, how many times has this child moved, that is changed his usual place of residence?” The answers to this question ranged from 0 to 10 times that he/she moved.

**Citizenship:** “Citizen status – Primary Care Give?” The answers to this question are as follows 1= Canadian citizen 2=Canadian citizen by naturalization 3= Not a Canadian citizen. The responses were recoded so that 0=Canadian citizen 1=Canadian citizen by naturalization and not Canadian citizen.

**Race:** “How would you best describe your race or colour?” This variable consisted of eleven separate questions for each race or colour including white, Chinese, South Asian, Black, Native/Aboriginal people, Arab/West Asian, Filipino, South East Asian, Latin

American, Japanese and Korean. The original variable was recoded where 0=White 1=all other race or colour.

### *3.4 Analytical Procedures*

#### **Step 1: Univariate Descriptive Analysis**

Frequencies were conducted on all the variables used in the analysis to identify missing cases in the sample and to examine the sample distribution and sample size (refer to Table 1 for a list of variables).

#### **Step 2: Variable Construction and Reliability**

Spearman correlation analysis was conducted to analyze the strength of relationship between selected variables using Cronbach alpha at  $p < 0.05$ . Variables with strong correlation  $p < 0.05$  were added to construct the peer social capital variable. The new variable will then be used as an indicator of peer social capital, low scores (i.e. 4) indicates relatively lower level peer social capital where as high scores (i.e.12) indicate relatively high level of peer social capital.

#### **Step 3: Multivariate Descriptive Analysis**

To answer Research Question #1: What is the relationship between participation in leisure programs and academic performance of Canadian adolescents (10-11 year olds)?

Regression is used for prediction, inference, and hypothesis testing and modeling of causal relationships with an underlying assumption of normal distribution of the data. When data does not satisfy the underlying assumptions of regression, as in cases where a dependent variable is dichotomous, logistic regression can be used to produce an equivalent analysis. Ordinal Logistic Regression was used to investigate the relationship between availability of attending out-of-school program participation and academic

performance of 10 and 11 year old males and females while controlling for family structure, number of siblings, household income, PMK education, citizenship status, relocation, gender of the child and rural/urban settings.

To answer Research Question #2: What is the relationship between peer social capital and academic performance of Canadian adolescents (10-11 year olds)?

Ordinal logistic regression analysis was conducted to investigate the impact peer social capital and frequency of 'hanging around kids who are often in trouble' on the academic performance of adolescence, while controlling for family structure, sibling number, household income, race, PMK educational attainment, immigrant status, relocation, gender of the child and rural/urban settings.

To answer research question #3: Does peer social capital mediate the relationship between leisure program participation and academic performance of Canadian adolescents (10-11 year olds)?

Ordinal logistic regression was conducted to inquire the interaction between peer social capital and overnight camp participation last summer, and the association the interaction has with academic performance of Canadian adolescents. The model will controlled for family structure, sibling number, household income, PMK educational, race, immigrant status, relocation, gender of the child and rural/urban settings.

#### IV. Chapter Four

##### *4.1 Results*

###### Sample Characteristics

The original sample of 2825 ten and eleven year old males and females available in the NLSCY Cycle 6 were used in the analysis. From the original sample, a total sample of 1764 ten and eleven year olds (47.6 percent males and 52.4 percent females) with complete NLSCY Cycle 6 data for academic performance, type of leisure program participation, frequency of relocation, gender, age, and peer interaction data were included in the final analysis.

Percentage of youth who were in the well/very well and average or below academic performance groups in comparison to household income is displayed in Table 1. The greatest percent (26.7%) of youth who were performing well/very well academically came from families with a household income greater than 100, 000 dollars per year. The lowest percent (4.1%) of youth in the well/very well academic performance category were from families with a household income of less than 20, 000 dollars per year. Further, the largest percent (25.1 %) of youth who were performing average or below academically were from families with a household income between 40, 200 – 60, 000 dollars per year. While, only 5.6 percent of youth in the average or below average academic performance group were from families with a household income of less than 20, 000 dollars per year.

Frequencies by age in relation to gender, academic performance, and leisure program attendance are summarized in Table 2. In the total sample (N=1764), 1322 youth (624 ten year olds and 698 eleven year olds) were performing well or very well

academically, 382 youth (187 ten year olds and 195 eleven year olds) were performing average academically and 60 youth (38 ten and 22 eleven year olds) were performing poorly or very poorly. During the school year, only 92 (10.8%) ten year olds and 56 (6.1%) eleven year olds used before/after school programs. While the summer before data collection, 104 (12.2%) of the ten year olds and 107 (11.6%) of eleven year olds attended a structured summer program, 378 (44.5%) of the ten year olds and 359 (39.2%) of eleven year olds attended a day camp, and 181 (21.3%) ten year olds and 248 (27.1%) eleven year olds attended an overnight camp. Significant differences between 10 and 11 year olds observed include academic performance, before/after school attendance, summer day camp and overnight camp ( $p < 0.005$ ).

A summary of sample characteristics of the ten and eleven year olds who attended one of the four leisure programs and their academic performance can be found in Graph 1. In the sample, 80 percent of children who were in the well or very well academic performance category attended overnight camp during the summer compared to the 73 percent of children who did not attend overnight camps last summer. Significantly increased odds of well/very well academic performance were observed among youth who attended overnight camp during the summer compared those who did not ( $p < 0.05$ ). Proportionally, youth who attended overnight camp had 7 percent greater “very well” academic performance compared to youth who attended structured summer programs, 6 percent greater than youth who attended before and after school programs and 3 percent greater than youth who attended summer day camp. Among youth who attended summer day camps, 77 percent showed academic performance of well or very well compared to 73 percent of youth did not attend a summer day camp. Inverse results are seen among

children who attended a before/after school program or a structured summer program. Among the children who attend before/after school programs, 74 percent were in the well/very well academic performance group compared to 75 percent of children who did not attend a before/after school program. Similarly, children who attended structured summer programs showed small differences in terms of academic performance. Out of the children who attended summer structured programs, 73 percent were in the well/very well academic performance group compared to 75 percent of children who did not attend summer structured program.

Differences in the sample by gender are summarized in Table 3. From the study sample, 70.4 percent of males performed well or very well academically compared to 78.7 percent of females who performed well or very well, 24.9 percent of males performed average academically compared to 18.7 percent of females and 4.3 percent of males performed poorly or very poorly in contrast to 2.6 percent of females. Out of the 148 youth who attend a before and after school program 44.7 percent were males and 55.4 percent are females. In the sample 211 youth attend a structured summer program, this included 53.6 males and 46.4 percent females. Further, 429 youth attended overnight camp during the summer, which consisted of 42.9 percent males and 57.1 percent females. Lastly, 737 youth attended a day camp during the summer, 48.4 percent males and 51.6 percent females. Significant differences between males and females were found for academic performance and overnight camp attendance ( $p < 0.05$ ).

Leisure program participation and academic performance by size of residence, PMK education level, and household income are summarized in Table 4. The greatest percentages of children, who attended before/after school programs and structured



summer programs live in areas with a population of 500,000 or more, have parents who graduated from university or college and have a household income greater than 100,000 dollars per year. On the other hand, children who attended overnight camps or day camp during the summer, largely come from small communities of population less than 30,000. The largest proportion of children who attended overnight camps or day camp during the summer have parents who graduated from college or university, and who come from families that earn more than 100,000 dollars per year. In addition, large percentages of children who performed well or very well academically reside in small size areas of residence ( $<30,000$ ), have parents who graduated from university or college and whose household income is greater than 100,000 dollars per year. Among those who attended before/after school programs, significant difference were observed regarding area size of residence ( $p<0.05$ ). The structured summer program group had differences across all categories; population size, PMK education, household income ( $p<0.05$ ). Similarly, the summer day camp group showed significant differences across all categories; population size, PMK education, household income ( $p<0.05$ ). And the summer overnight camp group only had significant differences in the household income ( $p<0.05$ ).

When observing the correlation between 1764 children ages ten and eleven who respond to the following questions; helps other children who are sick, offers to help other children with task, comforts a child who is crying or upset, will invite others to join a game, the raw-variable coefficient alpha for the four variables included in the analysis is 0.78. This coefficient exceeds the recommended minimum value of .70 (Nunnally, 1978 as cited in O'Rourke, Hatcher & Stepanski, 2005) and is very close to the ideal range of .80-.90 (Clark & Watson, 1995 as cited in O'Rourke et al., 2005). The above variables

described youth interactions with other youth (indicators of the process component of social capital) were added to create a peer social capital variable. Spearman correlation procedure was conducted to evaluate the internal consistency of this measure, in other words to investigate how reliable these selected questions would be when added together.

Results for the multivariate ordinal logistic regression analysis are displayed in Tables 6-19. When separate logistic regression models were performed for leisure program participation and peer social capital, only attending overnight camps last summer, peer social capital, gender, PMK education level and household income showed consistent statistical significance associated with academic performance. Additionally, citizenship showed inconsistent statistical evidence in its ability to predict academic performance. Other variables in the model including family structure, sibling number, race, frequency of relocation, type of school attending, residence size and age were consistently insignificant.

Ten and eleven year old youth who attended a before and after school program or structured summer program showed non statistical significant relationship with academic performance in the unadjusted model. In fact the relationship for both before/after school and structured summer programs showed a negative relationship with academic performance, but this relationship was statistically insignificant (Table 6, 7).

Alternatively, children who attended day camp during the summer showed as positive relationship with academic performance but also statistically insignificant (Table 8).

Lastly, the only statistically significant association was between attended overnight camp last summer and academic performance in the unadjusted model (Table 9). Youth who attended an overnight camp during the summer increased their odds of being in the very

well and well or average academic performance academic performance group (OR: 1.49, CI: 1.14 – 1.95). In the adjusted model the overnight camp continued to be statistically significant (OR: 1.47, CI: 1.14 – 1.95), in addition PMK Canadian citizen status (OR: 1.77, CI: 1.00 – 3.12), PMK education (OR: 1.21, CI: 1.08 – 1.35), household income (OR: 1.11, CI: 1.08 – 1.21) and gender (OR: 1.56, CI: 1.24 – 1.95) were also statistically associated with academic performance (Table 10). Other variables in the model showed non statistical significance; family structure, sibling number, race, area size of residence, frequency of relocation, or age.

In the unadjusted model (Table 14 – 17) for peer social capital (process component of social capital), children who spend more time with kids who are frequently in trouble (negative peer relationships) decrease their odds of being in the very well/well academic performance group (OR: 0.75, CI: 0.64-0.87). On the other hand, youth who show higher levels of positive peer relationships (help other children who are sick, offers to help other children with tasks, comforts a child who is crying or upset, will invite others to join games) had increased odds of performing very well/well academically (OR: 1.15, CI: 1.02 – 1.21). In the adjusted model positive peer social capital remained statistically significant but negative peer social capital was no longer statistically significant. The mode investigating peer social capital showed increased odds of higher academic performance among youth who had higher levels of peer social capital (OR: 1.14, CI: 1.07-1.23), other significant variables in the model include PMK education level (OR: 1.21, CI: 1.08 – 1.35), household income (OR: 1.11, CI: 1.02 – 1.21) and gender (OR: 1.45, CI: 1.15 – 1.82). Other variables in the model including family social

capital, race, frequency of moving, school social capital, citizenship, area size of residence and age showed no statistical significance.

Interaction(s) between peer social capital, PMK education, gender, number of siblings, family structure, type of school attending, frequency of relocation, household income, and hanging around kids who were frequently in trouble were tested for a potential mediating effect on relationship between overnight camp and academic performance. Results of the interaction test(s) showed statistically significant relationship only for the interaction between attending overnight camp last summer and peer social capital (Table 18, 19). Results indicate; when peer social capital score was 4 (a relatively low score), youth who attended overnight camp had 7.9 times higher odds comparing to youth who did not attend overnight camp to perform above average academically. And when peer social capital score was 12 (relatively high score), youth who attend overnight camp last summer had only 1 times higher odds in comparison to youth who did not attend overnight camp to perform average and above academically (Table 19/Graph 2).

## V. Chapter Five

### *5.1 Discussion*

Youth developmental research is shifting from a deficit perspective (primarily focusing on limiting or decreasing negative behaviour) towards a more positive and optimistic perspective. This perspective shines a new light on youth leisure (Eccles & Gootman, 2002; Witt, 2002), prompting the investigation of leisure and academic outcomes among youth. Three main research questions were examined in this study include what is the association between the four different leisure programs participated and academic performance in a sample of Canadian youth ages 10 and 11 years. The second research question investigated the role peer social capital plays in academic performance. And lastly whether there is a mediating effect between social capital and leisure programs on academic performance of adolescents.

Analysis results show that 86 percent of adolescents from the sample participated in at least one of the programs or camps during their leisure time (a measure of the structure component of social capital). The majority of adolescents participated in before/after school programs, summer structured programs and summer day camp, accounting for 62 percent, while only 24 percent of adolescents took part in overnight camps. During the school year, 8 percent of youth participated in before and after school programs and during the summer, 12 percent of adolescents took part in structured summer programs, 42 percent in day camps and 24 percent in overnight camps. A large percent of adolescents in the sample took part in one of the four leisure programs but only adolescents who attended overnight camp last summer compared to those who did not attend had a significantly greater likelihood of very well/well academic performance.

Similarly peer social capital (a measure of process component of social capital) was significantly associated with academic performance, in other words, with an increase in relative scores of peer social capital adolescents had a greater likelihood of good academic standings. Most importantly the interaction between overnight camp and peer social capital had a significant association with academic performance. The interactions showed that adolescents who had relatively low peer social capital scores but attended overnight camp last summer (compared to youth who did not attend overnight camp last summer) increased their odds of well/very well academic performance. While adolescents with relatively high levels of peer social capital, who attended overnight camp saw no change in their academic performance. As indicated by the results adolescents who had the most to gain from overnight camp did in fact gain the most.

The statistical significance of the interaction (peer social capital and overnight camp on the association with academic performance) highlights the value of both structural and process components of social capital (Coleman, 1988; Smith et al., 1995; Sun, 1999). Investigating the structural component of social capital provides a one dimensional understanding of the relationship between adolescent leisure programming, social capital and academic performance. The structural component of social capital is a measure the social setting where social interactions may occur. The process component of social capital adds a second dimension. The process component of social capital adds a measure of the actual and intentional interactions between peers that may take place during leisure programming.

There is limited research that investigates the benefits associated between academic performance for those who attended overnight camp during the summer and

lasting benefits of attending, especially in the school context (academics performance). Bialeschki et al. (2007) hypothesizes that “what happens at camp is expected to have some type of carryover into life beyond the time spent at camp” (p.774). The study results show that in fact attending overnight camp last summer had a positive association with academic performance upon return to school in the fall. The results of this study are consistent with Dimock and Hendry (1929), Henderson et al. (2007) and Thurber et al (2007) who identified positive outcomes among those who attended camp have persisted beyond the overnight camp environment. This leaves us with a question, why is overnight camp positively associated with academic performance. Focusing on the process component of social capital and identifying age specific developmental needs as well as positive youth development can provide us with an insightful understanding of the academic performance benefits associated with attending overnight camp.

Coleman states that investments in academic success of youth require both financial and social capital. Development of peer relationships is a significant developmental milestone among 10 and 11 year olds (Shaffer et al., 2005). The results of this study indicate that peers are in fact a significant source of social capital that is positively associated with academic performance. According to Coleman’s theory of social capital closure or a closed network of peers have high potential for development of social capital. Overnight camp provides an environment for the opportunity to develop tightly knit groups that result in social capital. The overnight camp environment can be an intense site that facilitates tightly knit groups; youth spend 24 hours per day together (there is no going home at the end of the day), typically for a week or two. The amount of time spent together, the intimacy associated with shared experiences and share living

arrangements; combined together (structure and process) are elements that have high potential for development of relationships. In addition, youth must adopt and cooperate with peers from a wide variety of backgrounds. Granovetter (1973) emphasizes the cohesive power of weak ties, which develops through bonding of people from diverse backgrounds, resulting in more inclusive social networks. Social capital can be accumulated through both tightly knit groups characterized by strong ties, as well as through exposure to diverse groups of people characterized by weak ties. Overnight camp can be seen as a social setting within which social interactions occur but more importantly that the setting allows for actual and intentional social interactions between peers. In other words, overnight camp can be characterized as a developmentally specific, rich environment with opportunity for development of peer social capital. But how does peer social capital act as a resource that is associated with academic performance?

Larson's (2000) positive youth development perspective suggests that overnight camp can be classified as "structured voluntary (not required for school) activity" that serves as a context for development of initiative (p.174). Initiative develops in the presence of a challenge/risk, where youth take agency, are engaged in the problem solving and see the results of their effort, when the challenge was overcome or the goal/personal project/skill was achieved. Larson suggests that certain contexts provide youth with greater opportunities for the development of initiative. Development of peer relationships has many challenges especially among 10 and 11 year olds. In many cases youth who attend overnight camp are away from home for the first time and are faced with many social challenges. Nevertheless, according to the Public Health Agency of



Canada (2008) youth engagement in risky behaviours or challenges is essential to maturation and development of meaningful relationships.

The social challenges that adolescents may face at overnight camp provide opportunity for the development of initiative. Time spent at camp without family members leaves youth to take on this challenge on their own or with the help of other adolescents at camp. The camp environment provides adolescents with many opportunities to solve this challenge and to take risks; during camp activities, living arrangements, chores or daily responsibilities/routines. More importantly, attending overnight camp for one or two weeks may allow for enough time to develop positive relationships with other adolescents (adolescents have time to problem solve and see the final results of their effort, meet the challenge, achieve the goal), in other words overnight camp is a site that may facilitate the complete process of initiative.

The results of this study show significant academic performance outcomes among overnight camp participation but non-significant association is observed among adolescents who attended the before/after school program, structured summer program or summer day camp. The non-significant academic performance outcomes associated with before/after school program, summer structured program or summer day camp may be due to limited opportunities for development of initiative or the processes needed to develop peer social capital. Unlike overnight camp, the other adolescent leisure programs may be offering limited opportunity for challenges, development and achievement of individual or shared goals and other developmentally specific challenges. Alternatively, overnight camp may be seen as a context that presents adolescents with abundant developmentally specific challenges. Overnight camp may be the first opportunity for

adolescents to be away from home for an extended period of time, among new peers and adults. Adolescents must adapt to the norms of the camp, complete chores and participate in activities that they may have never been exposed to before. The length of stay at camp allows adolescents to work through these challenges and learn new physical and social skills. The ability to adopt, participate in the daily activities or duties and even to make it through the camp itself can be seen as a sign of adolescents' ability to meet the challenges through individual or collaborative initiative. The opportunities for challenges, for engagement in the process of solving problems, achieving a goal or learning a new skill and having the time to see the final outcome may be limited (opportunities are limited to one or two components of 'initiative' but not enough opportunity for the full process) in the other programs/camp investigated.

In addition, overnight camp may be seen most as a 'voluntary activity (not required for school)' whereas before and after school programs, structured summer programs or even day camps, may not require the activity for school but the type of activities that adolescents have the opportunity to be engaged in may be too similar to the daily routines of being at school. The physical environment of before/after school programs, structured summer programs or even day camps may also be too similar to the structures of school and in many cases actually take place at a school. Whereas overnight camp is quite the opposite, typically taking place in outdoor/wilderness settings. The carry over of benefits may be the same across all programs but the opportunities and setting of the programs may govern the benefits achieved or the development of initiative. Resulting in variation in academic performance outcomes across the different programs.

Despite the abundant positive developmental outcomes associated with overnight camp participation, researchers tend to separate developmental outcomes gained during overnight camp from academic outcomes (Henderson, Scheuler Whiteaker, Bialeschki, Scanlin, & Thurber, 2007), where in fact this is not the case as indicated by the statistically significant interaction. Larson (2000) suggests that voluntary activities such as overnight camp “are contexts for development of qualities and skills, like initiative, that have general applicability across domains of life” (p.180). Summer overnight camp can be seen as an extension of the learning process that requires a significantly different environment from school settings and routines, developmentally relevant challenges and the opportunity to learn initiative rather than something completely separate. Henderson et al. (2007) states that in addition to academic competence youth need to have opportunities to grow towards physical, emotional, civic and social competence through family, community and institutions including organized camp programs. Separating academic performance from personal growth and development outcomes that result from summer camps may miss the value of such leisure activity. Personal growth and development that take place at summer camp teaches adolescents life skills (especially initiative) that they can use in the school environment. Development of life skills may result in adolescents having more confidence to overcome the potential social, emotional, psychological, physical challenges that may in turn benefit their academic performance outcomes.

Family background especially household income and parental education has long been associated with academic performance. Maani and Kalb (2007) support the value of income as an important resource throughout childhood in determining academic

performance. Further, Blau (1999) concludes that “family background and other family characteristics often have a large effect on child development” p. 273, supporting the significance of PMK education level as important predictors of youth academic performance. Significant effect of parental education level on academic performance is consistent with Spera, Wentzel and Matto (2009) who showed that parental education was positively and significantly associated with academic aspirations for their children. In turn parental aspirations for their child’s education motivates children’s setting of academic goals, persistence in school, course enrolment, intellectual accomplishment and college enrolment (Bronstein, Ginsburg, & Herrera, 2005).

The results of this study highlight health determinant variables including primary care give (PMK) education level and household income as significantly associated with academic performance across all models. In other words with each additional increase in PMK education level, the odds of very well academic performance increased significantly. Household income showed a similar association, as household income increased, the odds of very well academic performance increased significantly. The consistent significance of PMK education level and household income associated with academic performance among adolescents suggests that these variables must be addressed when developing strategies for improving academic performance among Canadian adolescents. As well, the significance of household income across all models supports Coleman’s (1988) notion that investments in academic success of youth require both financial and social capital.

Gender differences in academic performance were significant across all models. Gender differences in academic performance more specifically females performing better

than males, is supported by much of current literature. Pomerantz, Altermatt and Saxton (2002) showed that females outperformed males on all four subjects (language arts, social sciences, math and science) assessed in their study. This trend tends to be consistent across ethnic groups, Saunders, Davis, Williams and Williams (2004) study of African American males and females showed that males are falling behind their female peers. African American females are also graduating from high school at a higher rate and are going on to college and graduate school in greater numbers (Saunders, Davis, Williams, & Williams, 2004). Patterson, Kupersmidt and Vaden (1990) further support that gender differences exist across ethnic groups, stating that gender and income level were better predictors of children's competencies compared to ethnicity or household composition.

Overnight camp and peer social capital continued to be statistically significant even after controlling for key determinants of health (primary care giver education, citizenship, household income, area size of residence, race and gender). Suggesting that a certain type of leisure opportunities provide greater source of social capital (structure and process) may in fact play a key role in academic performance of Canadian adolescents. More importantly, the results may be suggesting that leisure opportunities may play a significant role in health and well-being of Canadian adolescents as they grow into adulthood.

This study was limited to the secondary data available through NLSCY Cycle 6, thus a definite picture of the benefits of attending overnight camp last summer, peer social capital and academic performance are limited to the data source. Due to the cross-sectional design of the study and limitations of data, results represent events at one point in time and the processes can only be hypothesized based on theory, past literature or the

researcher interpretation. It is important to point out that the PMK response to questions about the youth may be based on their own values, cultural background or understanding of the question. As well, PMK responses may be limited to their ability to recall certain activities, knowledge or behaviours about the youth. Other potential biases of the study include information, assessment, and analysis. Although, PMK recalled their knowledge of the youth, much of this knowledge especially regarding academic performance is based on youth's school work including report cards which provides a simple relative estimation of youth academic performance.

Despite the limitations associated with use of secondary data and cross-sectional study design. The data used in answering the research questions included a sample of adolescents from Canada's ten provinces, thus the results and generalizability of this study findings are to a large sample of adolescents from Canada's ten provinces. In addition, the use of secondary data allowed for a very cost effective study and efficient use of resources available from Statistics Canada. Lastly, the results of this study support future longitudinal research, as well have practical and conceptual implications.

## VI. Chapter Six

### *6.1 Conclusion*

Perceptions and public attitudes which view youth leisure as a time when youth get in trouble roam the streets, engage in risky behaviour and watch too much television tend to frame youth leisure policies from a problem-reduction point (United Nations, 2004). Resulting in preventative policies that continue to see youth leisure time as optional but not necessary or even particularly important, ignoring the possibilities of this time. Viewing youth leisure as a time for constructive development of life skills stimulates more proactive youth leisure policies. Proactive approaches focus on leisure as a time for capacity building including preparation for family life, employment, good citizenship, life long learning and personal fulfillment while providing opportunities for the development of communities and societies (Larson, 2000). The proactive view of youth leisure sees leisure in its own right, a right to be protected rather than a privilege to be earned or lost (United Nations, 2004).

Before and after school programs can be described as preventative programs which emerged largely due to policy commitments in response to reports that juvenile crime rates spike during the hours directly after school (American Youth Policy Forum, 2006; Boys and Girls Clubs of Canada, 2008). The focus of the majority of before and after school program is to keep youth busy during the hours that they are most likely to get into trouble (Boys and Girls Clubs of Canada, 2008). Before and after school programs simply add productive time to the day of youth and supplement academic learning (Witt, 2004), in other words filling in youth leisure time or extending the school day. This is even more evident when looking at the setting of before/after school

programs since many before and after school program in Ontario take place at the schools that youth attend.

On the other end of the spectrum, overnight camps can be seen through a more proactive policy lens. Overnight camps may provide opportunities to develop life skills by teaching adolescents in ways that schools cannot. Where adolescents experience community living, being away from home in the outdoor, recreation setting (Thurber et al., 2007). As well as, opportunities for intergenerational negotiations, freedom, adventure, self-exploration and self-determination (Paris, 2008). Camps are intrinsically motivating and provide structured voluntary activities with lots of opportunities to take initiative, risk and develop mastery (Larson, 2000). Camps can be seen as a place for innocent play that is joyful and spontaneous (Van Slyck, 2006). While providing an intense experience for youth through interactions with camp leaders and peers and participation in voluntary activities that are structured and often new or different (Henderson, Scheuler Whiteaker et al., 2007).

Summer structured programs and summer day camps can fall somewhere in between the two extremes. Blending preventative approaches and positive youth development (Thurber et al., 2007). During before or after school programs, summer day camps or structured programs adolescents may not experience the same environment and opportunities that may be available at overnight camp. Structured summer programs and day camps provide adolescents with opportunities for exploration, growth and development but not to the same degree of overnight camps. Similarly, structured summer programs and day camp are very different from before and after school



programs, to the extent that they typically last longer, and provide adolescents with activities that are not simply an extension of the school day.

Findings from this study support proactive adolescent programs that focus on positive youth development and development of social capital rather than preventative programs which simply fill adolescent time with very little opportunity to be challenged, develop new skills, achieve goals or develop positive relationships with peers.

Preventative programs are important but not adequate; adolescents who are problem free are not fully prepared young people for life challenges and responsibilities (United Nations, 2004). This raises a question regarding the summer time activity gap and the lasting consequences for youth who do not have the opportunity to develop and grow through intense experiences such as attending overnight camps (Alexander & Olson, 2007; Chin & Philips, 2004). If results of this study view overnight camp as complementary to the mainstream education in benefiting academic performance, then why are such opportunities dependent on personal circumstances? Future research should investigate gaps, barriers and motivation to participate in overnight camps among Canadian youth. In addition, research should investigate the longitudinal trends of attending summer overnight camps among youth as well as life trajectories of youth leisure participation and health inequalities.

The study findings highlight leisure as an extension of the learning process, not exclusive but rather complementary to the mainstream education process. This study suggests that peer social capital (positive relationship building) may not be innate but rather learned. Results show that that intense leisure opportunity such as overnight camps facilitates development of peer social capital, through what is suggested as a process of

facilitating initiative. The overarching benefit of leisure opportunities such as overnight camp is due to the social structure as well as opportunity for actual and intentional interactions that may lead to the development of peer social capital that can act as a resource for academic performance.

Equally important were the finding highlighting the significance of primary care giver education and household income in association with adolescents academic performance. Strategies aimed at improving adolescents' academic performance must aim at increasing opportunities for developmentally relevant and challenging opportunities such as overnight camps regardless of household income or primary care giver education level. Strategies may include scholarships for adolescents to attend overnight camp during the summer, fundraising, or tax relief for parents as an incentive for sending their children to overnight camp(s) during the summer.

The findings from this study may facilitate parents, teachers, researchers and the community to better understand Canadian adolescents, how different leisure opportunities, peers, and social economic status (PMK education and household income) were associated with academic performance. The evidence from this study may guide parents' choice regarding leisure programs for their child during the school year as well as the summer. Teachers may use these findings to incorporate more intense experiences (experiences that are very different from the everyday school curriculum or setting) for adolescents. Intense experiences may include opportunities for initiative. Initiative is a process through which youth have opportunity for developmentally relevant challenges, opportunity to solve challenges, to learn new skill or achieve a goal. More importantly the process of initiative involves the adolescents seeing the final results of their efforts.

Engagement in the process of initiative may in turn result in better academic performance. Researchers may use the study findings as part of a systematic literature review, use leisure as a determinant of health while studying adolescent health and well-being. As well, researchers may incorporate both structural and process components of social capital (Coleman, 1988; Smith et al., 1995; Sun, 1999) as a conceptual method when further investigating adolescent leisure programming, peer social capital and academic performance. Lastly, the community may use the study findings when developing adolescent leisure programming as well as for securing funding for adolescent leisure programming.

In conclusion, summer overnight camp(s), primary caregiver education level and household income have a significant association with academic performance. It appears that there is academic performance variation among adolescents participating in different leisure programs. Education is a key determinant of health thus variation in leisure opportunities may have long-term effect on health and well-being of adolescents as they grow into adulthood. Strategies aimed at increasing the odds of very well academic performance must therefore aim to increase opportunities for developmentally relevant programming for adolescents during their leisure.

Leisure programming for youth that aims at increasing the odds of very well academic performance should increase opportunities for developmentally specific challenges such as overnight camp participation during adolescence. Developmentally specific challenges (i.e. development of positive peer relationships) available to 10 and 11-year-olds during their leisure, in an appropriate environment (overnight camp) may facilitate the process of initiative. Initiative is the process involved in overcoming

challenges through individual/collaborative agency, engagement in the process or problem solving and ability to see through to meeting a challenge, learning a skill or achieving a goal, which may be instrumental to good academic performance. Increased odds of good academic standings may in turn contribute to the over all health and well-being. Lack of such intense and age appropriate opportunities during leisure may be responsible for academic performance gaps and in turn health and well-being inequalities. The results of this study support inclusion of adolescent leisure, primary care giver education level and household income as key variables when investigating academic performance among Canadian adolescents. Further, results of this study support leisure as a key variable when investigating health and well-being of Canadian adolescents. More importantly, the addition of adolescent leisure into the main list of determinants of health for the adolescent population may yield more comprehensive adolescent health policies.

## VII. References

- Alexander, K. L., & Olson, L. S. (2007). Lasting consequences of the summer learning gap. *American Sociological Review*, 72(April), 167-180.
- American Youth Policy Forum. (2006). *Helping youth succeed through out-of-school time programs*. Washington, DC: American Youth Policy Forum.
- Anderson-Butcher, D., Newsome, W. S., & Ferrari, T. M. (2003). Participation in boys and girls clubs an relationship to youth outcomes. . *Journal of Community Psychology*, 31(1), 39-55.
- Arai, S. (2000). A typology of volunteers for changing sociopolitical context: The impact on social capital, citizenship and civil society. . *Society and Leisure*, 23, 327-352.
- Becker, G. S. (1993). *Human Capital* (Third Edition). Chicago: The University of Chicago Press.
- Bialeschki, M. D., Henderson, K. A., & Penny, J. A. (2007). Camp experience and developmental outcomes for youth. *Child and Adolescent Psychiatric Clinics of North America.*, 16, 769-788.
- Boyce, W., Roche, J., & Davies, D. (2009). *Adolescent Health: Policy, Science, and Human Rights*. Montreal: McGill-Queen's University Press.
- Boys and Girls Clubs of Canada. (2008). *Transforming out-of-school hours to achieve better health, educational attainment, and lifelong productivity for young Canadians*. Markham: Boys and Girls Clubs of Canada.
- Bronstein, P., Ginsburg, G. S., & Herrera, I. S. (2005). Parental predictors of motivational orientation in early adolescence: A longitudinal study. *Journal of Adolescence*, 34, 559-575.

- Cairns, R. B., Leung, M., Buchanan, L., & Cairns, B. D. (1995). Friendships and social networks in childhood and adolescence: Fluidity, reliability and interrelations. *Child Development, 66*(5), 1330-1345.
- Cambell, C., Wood, R., & Kelly, M. (1999). *Social Capital and Health* London: Health Education Authority.
- Carlson, E. D., & Chamberlain, R. M. (2003). Social capital, health and health disparities. *Journal of Nursing Scholarship, 35*(4), 325.
- CCSD. (2006). *Progress of Canada's Children and Youth*. Ottawa: Canadian Council on Social Development.
- Chin, T., & Philips, M. (2004). Social reproduction and child-rearing practices: Social class, children's agency, and the summer activity gap. *Sociology of Education, 77*(July), 185-210.
- Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology, 94*/Suplement, S95-S120.
- De Wit, D. J., Lipman, E., Manzano-Munguia, M., Bisanz, J., Graham, K., Offord, D. R., et al. (2006). Feasibility of a randomized controlled trial for evaluation the effectiveness of Big Brothers Big Sisters community match program at the national level *Children and Youth Services Review, 29*, 383-404.
- Downey, D. B. (1995). When bigger is not better: Family size, parental resources and children's educational performance. *American Sociological Review, 60*, 746-761.
- Eccles, J. S., Barber, B. L., Stone, M., & Hunt, J. (2003). Extracurricular actives and adolescent development. *Journal of Social Issues, 59*(4), 865-889.
- Field, J. (2003). *Social Capital*. London and New York: Routledge.

- Field, J. (2008). *Social Capital: Second Edition* New York: Routledge.
- Furstengerg Jr., F. F., & Hughes, M., E. (1995). Social Capital and Successful Development Among At-Risk Youth. *Journal of Marriage and the Family*, 57(August 1995).
- Garst, B. A. (2005). *2003-2004 Virginia 4-H Camping Report*. Blacksburg, Virginia: State 4-H Office.
- Glover, T. D. (2006). Towards a critical examination of social capital within leisure contexts: From production and maintenance to distribution *Journal of the Canadian Association for Leisure Studies*, 30(2), 357-367.
- Glover, T. D., & Hemingway, J. L. (2005). Locating Leisure in the Social Capital Literature. *Journal of Leisure Research*, 37(4), 387- 401.
- Goddard, R. D. (2003). Relational Networks, Social Trust, and Norms: A Social Capital Perspective on Students' Chances of Academic Success. *Educational Evaluation and Policy Analysis*, 25(1), 59-74.
- Granovetter, M. S. (1973). The Strength Of Weak Ties. *American Journal of Sociology*, 78(6).
- Henderson, K. A., Bialeschki, M. D., & James, P. A. (2007). Overview of camp research *Child and Adolescent Psychiatric Clinics of North America.*, 16, 755-767.
- Henderson, K. A., Scheuler Whiteaker, L., Bialeschki, M. D., Scanlin, M. M., & Thurber, C. A. (2007). Summer camp experiences: Parental Perceptions of youth development outcomes. *Journal of Family Issues*, 28, 987-1007.
- Homans, G. (1950). *The Human Group*. New York: Harcourt, Brace & World.

- Isreal, G. D., Beaulieu, L. J., & Hartless, G. (2001). The influence of family and community social capital on education achievement. *Rural Sociology*, 66(1), 43-68.
- Kane, T. J. (2004). *The impact of after-school programs: Interpreting the results*. Los Angeles: William T. Grant Foundation.
- Kidder, K., Stein, J., & Fraser, J. (2000). *The Health of Canada's Children*. Ottawa: Canadian Institute of Child Health.
- Klein, S. P., & Bolus, R. (2002). *Improvements in math and reading scores of students who did and did not participate in the Foundations after school enrichment program during the 2001-2002 school year*. Santa Monica, CA: Gansk & Associates.
- Larson, R. (2000). Towards a psychology of positive youth development. *American Psychologist*, 55, 170-183.
- Larson, R., & Verma, S. (1999). How children and adolescents spend time across the world: work, play and developmental opportunities. *Psychological Bulletin*, 125(6), 701-736.
- Leitch, K., K. (2007). *Reaching for the top. A report by the advisor on healthy children and youth*. Ottawa: Health Canada.
- Lerner, R. M., Fisher, C. B., & Weinberg, R. A. (2000). Toward a science for and of the people: Promoting civil society through the application of the developmental science. *Child Development*, 71(1), 11-20.
- Mahoney, J. L., Lord, H., & Carryl, E. (2005). An ecological analysis of after-school program participation and the development of academic performance and



motivational attributes for disadvantaged children. *Child Development*, 76(4), 811-825.

Mahoney, J. L., Parente, M. E., & Lord, H. (2007). After-school program engagement: links to child competence and program quality and content. *The Elementary School Journal* 107(4), 385-404.

Paris, L. (2008). *Children's nature; The rise of the American summer camp*. New York: New York University Press.

Public Health Agency of Canada. (2008). *Health Settings for Young People in Canada*. Ottawa: Ministry of Health.

Putnam, R. D. (1995). Bowling Alone: America's Decline Social Capital. *Journal of Democracy*, 6(1), 65-78.

Richards, M. H., Crowe, P. A., Larson, R., & Swarr, A. (1998). Developmental patterns and gender differences in the experience of peer companionship during adolescence. *Child Development*, 69(1), 154-163.

Rose-Krasnor, L., Busseri, M. A., Willoughby, T., & Chalmers, H. (2006). Breadth and intensity of youth activity involvement as contexts for positive development. *Journal of Youth and Adolescence*, 35(3), 385-499.

Roth, J., Brooks-Gunn, J., Murray, L., & Foster, W. (1998). Promoting healthy adolescents: Synthesis of youth development program evaluations. *Journal of Research on Adolescence*, 8(4), 423-459.

Sao Paulo Declaration. (1998). *Leisure in a Globalized Society*. Sao Paulo, Brazil: United Nations Research Institute for Social Development.

- Saunders, J., Davis, L., Williams, T., & Williams, J. H. (2004). Gender differences in self-perceptions and American outcomes: A study of African American high school students. *Journal of Youth and Adolescence*, 33(1), 81-90.
- Shaffer, D. R., Wood, E., & Willoughby, T. (2005). *Developmental Psychology, Childhood and Adolescence*. Toronto: Nelson.
- Shernoff, D. J., & Lowe Vandell, D. (2007). Engagement in after-school program activities: quality of experience from the perspective of participants. *Journal of Youth Adolescence*, 36, 891-903.
- Smith, M. H., Beaulieu, L. J., & Seraphine, A. (1995). Social Capital, Place of Residence and College Attendance. *Rural Sociological Society*, 60(3), 363-380.
- South, S. J., Baumer, E. P., & Lutz, A. (2003). Interpreting community effects on youth educational attainment. *Youth and Society*, 35(1), 3-36.
- Stanton-Salazar, R. D. (1997). A social capital framework for understanding the socialization of racial minority children and youths. *Harvard Education Review*, 67, 1-40.
- Stanton-Salazar, R. D., & Dornbusch, S. M. (1995). Social capital and the reproduction of inequality: Information networks among Mexican-origin high school students. *Sociology of Education*, 68, 116-135.
- Statistics Canada. (2006). National Longitudinal Survey of Children and Youth (NLSCY) (Cycle 6). Retrieved February 5, 2009, from [www.statcan.gc.ca](http://www.statcan.gc.ca)
- Stnfield, R., Manning, R., Budruk, M., & Floyd, M. (2005). *Racial discrimination in parks and outdoor recreation: An empirical study*. PA:US: Forest Service, Northeastern Research Station.

- Sun, Y. (1999). The contextual effects of community social capital on academic performance. *Social Science Research*, 28, 403-426.
- Thurber, C. A., Scanlin, M. M., Scheuler, L., & Henderson, K. A. (2007). Youth development outcomes of the camp experience: Evidence for multidimensional growth. *Journal of Youth Adolescence*, 36, 241-254.
- Tierney, J. P., Grossman, J. B., & Resch, N. L. (1995). *Making a difference: An impact study of Big Brothers/Big Sisters*. Philadelphia: Public/Private Ventures.
- UNICEF, I. R. C. (2007). *Child poverty n perspective: An overview of child and well-being in rich countries report card 7*.
- United Nations. (1948). *The Universal Declaration of Human Rights*: United Nations.
- United Nations. (2004). *World Youth Report 2003*. New York: Department of Economics and Social Affairs.
- United Way Toronto. (2008). *Youth Policy: What Works and What Doesn't?* . Toronto: United Way Toronto.
- Van Slyck, A. (2006). *A manufactured wilderness: Summer camps and the shaping of American youth, 1890-1960*. Minneapolis: University of Minnesota Press.
- Welsh, M., Russell, C., Williams, I., Reisner, E., & White, R. (2002). *Promoting learning and school attendance through after-school programs: Student level changes in educational performance across TASC's first three years*. Washington, DC: Policy Studies Associates.
- Witt, P. A. (2004). Developing quality after-school programs. *Journal of Parks and Recreation Administration*, 22(4), 103-126.

Yuen, F., Pedlar, A., & Mannell, R. (2005). Building community and social capital through children's leisure in the context of an international camp. *Journal of Leisure Research*, 37(4), 494-518.

## VIII. Tables

Table 1: Academic performance by household income

Variable	Academic Performance	
	Very Well/ Well	Average/Poor/Very Poor
Household Income	N (%)	N(%)
<\$20,000	54 (4.1)	25 (5.6)
\$20,200-40,000	173 (13.1)	68 (15.4)
\$40, 200 - 60,000	236 (17.9)	111 (25.1)
\$60,080-80,000	272 (20.6)	98 (22.2)
\$80,008-100,000	234 (17.7)	54 (12.2)
\$100,000+	353 (26.7)	86 (19.5)

Table 2: Sample characters by age

Variable	10 years old N=849	11 years old N=915
Gender	N (Percent)	N (Percent)
Male	415 (48.88)	424 (46.43)
Female	434 (51.12)	491 (53.66)
Academics performance		
Very well/well	624 (73.50)*	698 (76.28)*
Average	187 (22.03)*	195 (21.31)*
Poorly/very poorly	38 (4.48)*	22 (2.40)*
Before/after school program	92 (10.84)*	56 (6.12)*
Structured summer program	104 (12.25)	107 (11.69)
Summer day camp	378 (44.52)*	359 (39.23)*
Overnight summer camp	181 (21.32)*	248 (27.10)*

\*Differences significant at  $p < 0.05$

Figure 1: Leisure program attendance by percent of well/very well academic performance

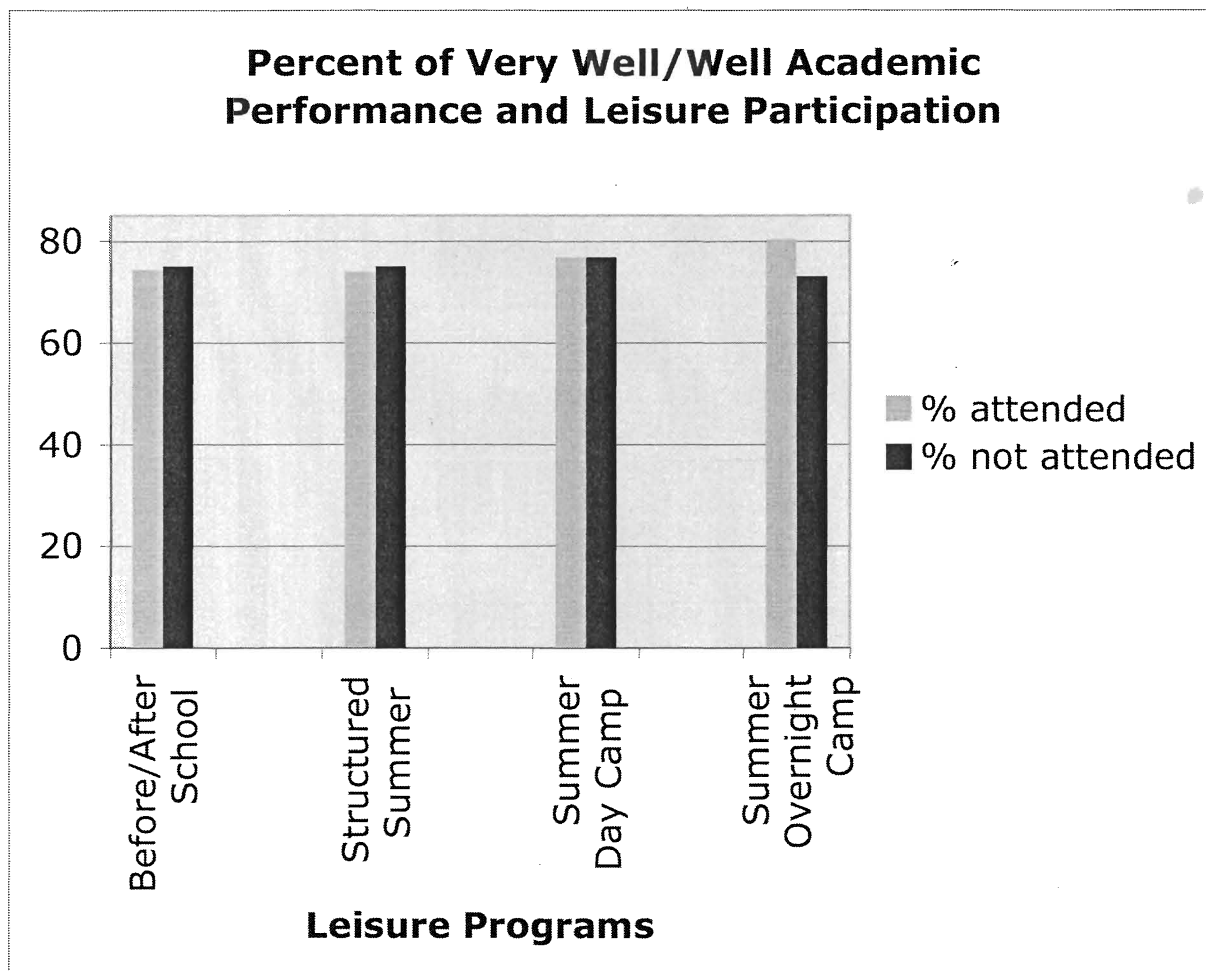


Table 3: Sample characteristics by gender

Variable	Male	Female
Academic performance	N (Percent)	N (Percent)
Well/very well	594 (70.80)*	728 (78.70)*
Average	209 (24.91)*	173 (18.70)*
Poorly/very poorly	36 (4.29)*	24 (2.59)*
Before/after school program	66 (7.87)	82 (8.86)
Structured summer program	113 (13.47)	98 (10.59)
Summer day camp	357 (42.55)	380 (41.08)
Overnight summer camp	184 (21.93)*	245 (26.49)*

\*Differences significant at  $p < 0.05$

Table 4: Before/after school, structured summer, day camp, overnight camp program participation by residence, PMK education level, household income

Variable	Before/After School	Structured Summer	Day Camp	Overnight Camp
Size of area of residence	N (Percent)	N (Percent)	N (Percent)	N (Percent)
Population				
<30,000	48(32.43)*	63(29.85)*	354(48.03)*	230(53.62)
30, 000 – 99,999	15(10.14)*	26(12.32)*	80(10.85)*	38(8.86)
100,000 – 499,99	22(14.86)*	40(18.96)*	134(18.18)*	75(17.48)
500, 000+	63(42.57)*	82(38.86)*	169(22.93)*	86(20.05)
PMK highest education level				
Secondary school or less	35(23.97)	44(21.05)*	178(24.35)*	113(26.59)
Some post secondary	15(10.27)	23(11.00)*	98(13.41)*	66(15.53)
College/university	96(65.75)	142(67.94)*	455(62.24)*	246(57.88)
Household income				
< \$40,000	25(16.89)	30(14.22)*	104(14.03)*	85(19.81)*
\$40,200-\$60,000	27(18.24)	34(16.11)*	126(17.10)*	84(19.58)*
\$60,080-\$80,000	27(18.24)	40(18.96)*	128(17.37)*	81(18.88)*
\$80,008-\$100,000	24(16.22)	33(15.64)*	123(16.69)*	70(16.32)*
>\$100,000	45(30.41)	74(35.07)*	256(34.74)*	109(25.41)*

\*Differences significant at  $p < 0.05$ 

Table 5: Summary of correlations for peer social capital

Variable	1	2	3	4	M	SD
1. Helps other children	-	0.54**	0.59**	0.46**	2.53	0.56
2. Offers help with task		-	0.51**	0.35**	2.57	0.52
3. Comforts a child who is upset			-	0.38**	2.60	0.53
4. Invites others to join games				-	2.65	0.52

\*\* $p < 0.0001$

Table 6: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending overnight camp during the summer.

Variable	b (se(b))	OR (95% CI)
$\alpha_1$	1.09 (<0.001)	-
$\alpha_2$	3.34(<0.001)	-
Before/after school program	-0.03 (0.86)	0.93 (0.67-1.29)
Model Fit <sup>a</sup>	$X^2_1 = 0.03$ (0.86)	
Score Test <sup>b</sup>	$X^2_1 = 0.01$ (0.92)	

a. Likelyhood ratio test

b. For the proportional odds assumption

\*\*p&lt;0.05

Table 7: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending structured summer program.

Variable	b (se(b))	OR (95% CI)
$\alpha_1$	1.10(<0.001)	-
$\alpha_2$	3.35(<0.001)	-
Structured summer program	-0.07 (0.67)	0.93 (0.67-1.29)
Model Fit <sup>a</sup>	$X^2_1 = 0.17$ (0.67)	
Score Test <sup>b</sup>	$X^2_1 = 0.37$ (0.54)	

a. Likelyhood ratio test

b. For the proportional odds assumption

\*\*p&lt;0.05

Table 8: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending day camp during the summer.

Variable	b (se(b))	OR (95% CI)
$\alpha_1$	1.02(<0.001)	-
$\alpha_2$	3.27(<0.001)	-
Day camp	0.18 (0.0983)	1.20 (0.96-1.499)
Model Fit <sup>a</sup>	$X^2_1 = 2.75$ (p=0.09)	
Score Test <sup>b</sup>	$X^2_1 = 1.09$ (p=0.29)	

a. Likelyhood ratio test

b. For the proportional odds assumption

\*\*p&lt;0.05



Table 9: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending overnight camp during the summer.

Variable	b (se(b))	OR (95% CI)
$\alpha_1$	1.00(<0.001)	-
$\alpha_2$	3.26(<0.001)	-
Overnight camp	0.40(0.003)**	1.49 (1.14-1.95)**
Model Fit <sup>a</sup>	$X^2_1 = 9.21$ (p=0.00)	
Score Test <sup>b</sup>	$X^2_1 = 0.23$ (p=0.62)	

a. Likelihood ratio test

b. For the proportional odds assumption

\*\*p&lt;0.05

Table 10: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending overnight camp during the summer and other control variables\*

Variable	b (se(b))	OR (95% CI)
$\alpha_1$	-1.35(0.27)	-
$\alpha_2$	0.40(0.45)	-
Overnight camp	0.39(0.01)**	1.47 (1.14-1.95)**
Family structure	0.15(0.30)	1.13 (0.86-1.49)
Sibling Number	-0.11(0.13)	0.89 (0.77-1.03)
Race	-0.35(0.23)	0.70 (0.39 – 1.26)
Frequency of moving	-0.11(0.14)	0.89 (0.76-1.05)
Type of school	-0.06(0.73)	0.94 (0.68 -1.31)
PMK citizenship	0.57(0.04)**	1.71 (1.00 - 3.11)**
PMK education	0.19(0.00)**	1.21 (1.08 -1.35)**
Size area of residence	-0.04(0.19)	0.96 (0.89-1.05)
Household income	0.10(0.02)**	1.11 (1.02-1.22)**
Gender	0.44(0.0001) **	1.56 (1.24-1.96)**
Age	0.12(0.17)	1.13 (0.90-1.42)
Model Fit <sup>a</sup>	$X^2_{11} = 64.41$ (p=<0.0001)	
Score Test <sup>b</sup>	$X^2_{11} = 16.65$ (p=0.16)	

a. Likelihood ratio test

b. For the proportional odds assumption

\*\*p&lt;0.05

\*Adjusted for family structure, sibling number, frequency of moving, type of school attending, PMK education, citizen status, household income, residence size, gender and age

Table 11: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending before/after school program during the summer and other control variables\*

Variable	b (se(b))	OR (95% CI)
$\alpha 1$	-1.37(0.27)	-
$\alpha 2$	0.91(0.47)	-
Before/after school program	-0.07(0.72)	0.927 (0.61-1.40)
Family structure	0.14(0.31)	1.15 (0.87-1.53)
Sibling Number	-0.11(0.12)	0.89 (0.77-1.03)
Race	-0.34(0.25)	0.71 (0.39 – 1.27)
Frequency of moving	-0.09(0.24)	0.91 (0.77-1.07)
Type of school	-0.06(0.70)	0.94 (0.67 -1.31)
PMK citizenship	0.53(0.06)	1.69 (0.96 – 2.97)**
PMK education	0.19(0.00)**	1.22 (1.09 -1.36)**
Size area of residence	-0.03(0.44)	0.97 (0.88-1.05)
Household income	0.10(0.02)**	1.11 (1.02-1.22)**
Gender	0.46(0.0001) **	1.58 (1.26-1.98)**
Age	0.13(0.25)	1.14 (0.90-1.43)
Model Fit <sup>a</sup>	$X^2_{11} = 56.88$ (p=<0.0001)	
Score Test <sup>b</sup>	$X^2_{11} = 17.29$ (p=0.14)	

a. Likelyhood ratio test

b. For the proportional odds assumption

\*\*p<0.05

\*Adjusted for family structure, sibling number, frequency of moving, type of school attending, PMK education, citizen status, household income, residence size, gender and age

Table 12: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending day camp during the summer and other control variables\*

Variable	b (se(b))	OR (95% CI)
$\alpha 1$	-1.44(0.24)	-
$\alpha 2$	0.84(0.50)	-
Day camp	0.03(0.76)	1.03 (0.82-1.34)
Family structure	0.15(0.31)	1.15 (0.87-1.53)
Sibling Number	-0.11(0.14)	0.90 (0.77-1.04)
Race	-0.34(0.25)	0.71 (0.39 – 1.27)
Frequency of moving	-0.10(0.23)	0.97 (0.71-1.07)
Type of school	-0.06(0.73)	0.95 (0.68 -1.31)
PMK citizenship	0.53(0.06)	1.70 (0.97-2.98)
PMK education	0.19(0.00)**	1.21 (1.08 -1.36)**
Size area of residence	-0.04(0.39)	0.96 (0.89-1.05)
Household income	0.10(0.02)**	1.11 (1.01-1.22)**
Gender	0.46(0.0001) **	1.58 (1.26-1.99)**
Age	0.13(0.23)	1.14 (0.90-1.44)
Model Fit <sup>a</sup>	$X^2_{11} = 56.84$ (p=<0.0001)	
Score Test <sup>b</sup>	$X^2_{11} = 16.98$ (p=0.15)	

a. Likelyhood ratio test

b. For the proportional odds assumption

\*\*p<0.05

\*Adjusted for family structure, sibling number, frequency of moving, type of school attending, PMK education, citizen status, household income, residence size, gender and age

Table 13: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for attending structured summer and other control variables\*

Variable	b (se(b))	OR (95% CI)
$\alpha 1$	-1.40(0.26)	-
$\alpha 2$	0.89(0.47)	-
Structured Summer	-0.14 (0.41)	0.86 (0.61-1.23)**
Program	0.14(0.33)	1.15 (0.87-1.52)
Family structure	-0.12(0.11)	0.89 (0.77-1.03)
Sibling Number	-0.34(0.24)	0.70 (0.39 – 1.26)
Race	-0.10(0.23)	0.90 (0.77-1.06)
Frequency of moving	-0.07(0.70)	0.94 (0.68 -1.31)
Type of school	0.52(0.07)	1.68 (0.96 - 2.95)
PMK citizenship	0.20(0.00)**	1.22 (1.09 -1.36)**
PMK education	-0.03(0.50)	0.97 (0.89-1.06)
Size area of residence	0.11(0.02)**	1.15 (1.02-1.22)**
Household income	0.46(0.0001) **	1.58 (1.26-1.96)**
Gender	0.13(0.17)	1.14 (0.91-1.43)
Age		
	$X^2_{11} = 57.38$ (p=<0.0001)	
Model Fit <sup>a</sup>	$X^2_{11} = 16.48$ (p=0.17)	
Score Test <sup>b</sup>		

a. Likelyhood ratio test

b. For the proportional odds assumption

\*\*p&lt;0.05

\*Adjusted for family structure, sibling number, frequency of moving, type of school attending, PMK education, citizen status, household income, residence size, gender and age

Table 14: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for peer social capital.

Variable	b (se(b))	OR (95% CI)
$\alpha 1$	-0.47(0.15)	-
$\alpha 2$	1.79 (<0.0001)	-
Peer social capital	0.15 (<0.0001)**	1.16 (1.09-1.24)**
Model Fit <sup>a</sup>	$X^2_1 = 22.23$ (p=<0.001)	
Score Test <sup>b</sup>	$X^2_1 = 2.61$ (p=0.10)	

a. Likelyhood ratio test

b. For the proportional odds assumption

\*\*p&lt;0.05

Table 15: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for peer social capital and other control variables\*

Variable	b (se(b))	OR (95% CI)
$\alpha 1$	-2.74 (0.03)**	-
$\alpha 2$	-0.44 (0.45)	-
Peer social capital	0.13 (<0.0001)**	1.14 (1.07-1.22)**
Family structure		
Both biological parents	0.14 (0.31)	1.15 (0.87-1.53)
other		
Sibling Number	-0.10 (0.16)	0.90 (0.78-1.04)
Race	-0.32 (0.28)	0.72 (0.40-1.30)
Frequency of moving	-0.09 (0.26)	0.91 (0.77-1.07)
Type of school		
Catholic	-0.09 (0.61)	0.91 (0.66-1.28)
Other		
PMK citizenship	0.54 (0.06)	1.72 (0.98-3.03)
PMK education	0.19 (0.00)**	1.21 (1.08-1.35)**
Size area of residence	-0.02 (0.50)	0.97 (0.89-1.05)
Household income	0.11 (0.02)**	1.11 (1.02-1.81)**
Gender	0.37 (0.00)**	1.45 (1.15-1.82)
Age	0.13 (0.26)	1.14 (0.91-1.43)
Model Fit <sup>a</sup>	$X^2_{11} = 72.36$ (p=<0.0001)	
Score Test <sup>b</sup>	$X^2_{11} = 18.73$ (p=0.09)	

a. Likelyhood ratio test

b. For the proportional odds assumption

\*\*p&lt;0.05

\*Adjusted for family structure, sibling number, race frequency of moving, type of school attending, PMK education, citizen status, household income, residence size, gender and age

Table 16: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for children hanging around kids who are often in trouble.

Variable	b (se(b))	OR (95% CI)
$\alpha 1$	1.50 (<.0001)	-
$\alpha 2$	3.76 (<0.0001)	-
Around kids frequently in trouble	-0.28 (0.00)**	.075 (0.64-0.87)**
Model Fit <sup>a</sup>	$X^2_1 = 13.29$ (p=0.00)	
Score Test <sup>b</sup>	$X^2_1 = 0.45$ (p=0.49)	

a. Likelyhood ratio test

b. For the proportional odds assumption

\*\*p&lt;0.05

Table 17: Cumulative Odds of performing well/very well or average academically and cumulative probabilities children who hang around kids who are often in trouble and other control variables\*

Variable	b (se(b))	OR (95% CI)
$\alpha 1$	-1.59 (0.19)	-
$\alpha 2$	0.69 (.57)	-
Around kids often in trouble	-0.15 (0.07)	0.85 (0.72-1.01)
Family structure		
Both biological parents	0.12 (0.39)	1.13 (0.85-1.50)
other	ref	
Sibling Number	-0.11 (0.07)	0.89 (0.77-1.03)
Race	-0.30 (0.31)	0.90 (0.77-1.05)
Frequency of moving	-0.10 (0.21)	0.74 (0.41-1.32)
Type of school		
Catholic	-0.07 (0.67)	0.93 (0.67-1.29)
Other		
PMK citizenship	0.47 (0.09)	1.61 (0.91 – 2.83)
PMK education	0.18 (0.00)**	1.20 (1.08-1.34)**
Size area of residence	-0.03 (0.42)	0.96 (0.88-1.05)
Household income	0.10 (0.01)**	1.11 (1.01-1.21)**
Gender	0.43 (0.00)**	1.53 (1.22-1.93)**
Age	0.13 (0.24)	1.14 (0.91-1.43)
Model Fit <sup>a</sup>	$X^2_{11} = 59.398$ (p=<0.0001)	
Score Test <sup>b</sup>	$X^2_{11} = 18.29$ (p=0.10)	

a. Likelihood ratio test

b. For the proportional odds assumption

\*\*p&lt;0.05

\*Adjusted for family structure, sibling number, race, frequency of moving, type of school attending, PMK education, citizen status, household income, residence size, gender and age

Table 18: Cumulative Odds of performing well/very well or average academically and cumulative probabilities for the interaction between children who attend summer overnight camp and peer social capital and other control variables\*

Variable	b (se(b))	OR (95% CI)
$\alpha 1$	-3.38 (0.01)**	-
$\alpha 2$	-1.07 (0.42)	-
Overnight camp	2.73 (0.00)**	-
Peer social capital	0.17 (<.0001)**	-
Family structure	0.15 (0.28)	1.16 (0.88-1.55)
Sibling Number	-0.11 (0.14)	0.90 (0.77-1.03)
Race	-0.33(0.27)	0.71 (0.39-1.29)
Frequency of moving	-0.11 (0.20)	0.90 (0.76-1.05)
Type of school	-0.09 (0.59)	0.90 (0.76-1.06)
PMK citizenship	0.61 (0.04)**	1.84 (1.04-3.27)**
PMK education	0.19 (0.00)**	1.21 (1.08-1.35)**
Size area of residence	-0.04 (0.46)	0.96 (0.89-1.05)
Household income	0.11 (0.00)**	1.12 (1.03-1.23)**
Gender	0.36 (0.00)**	1.43 (1.13-1.78)**
Age	0.17 (0.13)	1.18 (0.94-1.81)
Overnight camp*Peer social capital	-0.23 (0.01)**	-
Model Fit <sup>a</sup>	$X^2_{13} = 86.65$ (p=<0.0001)	
Score Test <sup>b</sup>	$X^2_{13} = 19.50$ (p=0.15)	

a. Likelyhood ratio test

b. For the proportional odds assumption

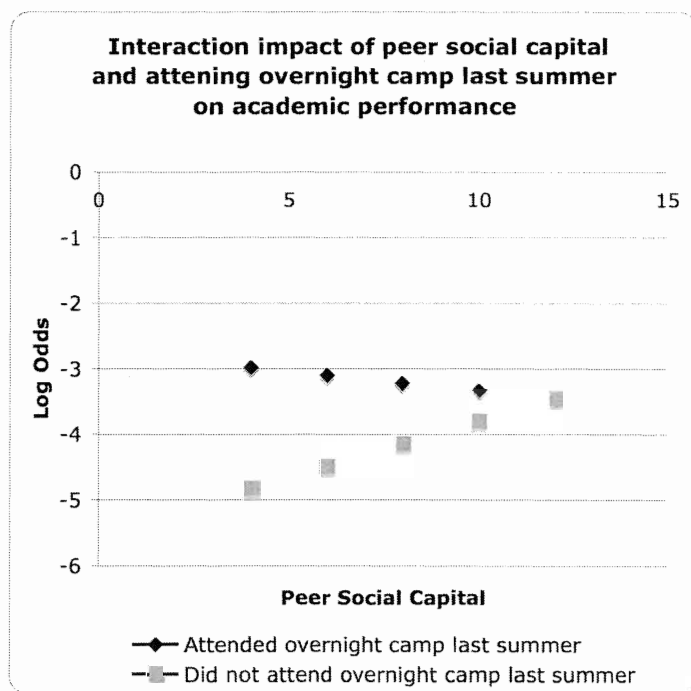
\*\*p<0.05

\*Adjusted for family structure, sibling number, race, frequency of moving, type of school attending, PMK education, citizen status, household income, residence size, gender and age

Table 19: Odds ratio for the effect of overnight camp on academic performance, mediated by peer social capital.

Variable	Coefficient	4		6		8		10		12	
Overnight camp		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Intercept	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91	-3.91
Intercept	-1.59	-1.59	-1.59	-1.59	-1.59	-1.59	-1.59	-1.59	-1.59	-1.59	-1.59
Overnight Camp	2.76	2.76	0	2.76	0	2.76	0	2.76	0	2.76	0
Peer Social Capital	0.17	.68	.68	1.02	1.02	2.04	2.04	1.7	1.36	2.04	2.04
Camp*Peer	-.23	-.92	0	-1.38	0	-2.76	0	-2.3	0	-2.76	0
Sum log-odds		-2.98	-4.82	-3.1	-4.48	-3.22	-3.46	-3.34	-3.8	-3.46	-3.46
Log OR = log odds overnight camp attended last summer – did not attend		2.07		1.38		0.92		.46		0	
Odd ratio		7.9		3.97		1.99		1.58		1	

Figure 2: Interaction effect between peer social capital and attending overnight camp last summer on academic performance.





## IX. Appendixes

## Appendix A

**FEDCQ14D – Academic Performance**

Based on your knowledge of his school work, including his report cards ...how is he doing overall?

- 01 Very well
- 02 Well
- 03 Average
- 04 Poorly
- 05 Very poorly
- 96 Valid skip
- 97 Don't know
- 99 Not stated

**FMMCQ02 – Gender**

Gender of child

- F Female
- M Male
- 9 Not stated

**FCRCeD2A – Before and After School Program**

Primary Type of Childcare

- 01 Care in someone else's home by a non relative
- 02 Care in someone else's home by a relative
- 03 Care in child's home by a non relative
- 04 Care in child's home by a relative other than child's brother or sister brother or sister
- 05 Care in child's home by child's brother or sister
- 06 Daycare centre
- 07 Before and after school program
- 08 Nursery school/Preschool
- 09 Child in own care
- 10 Other
- 11 Does not use child care
- 96 Valid skip
- 99 Not stated

**FCRCQ08H – Structured Summer Program**

Last summer while this child was not in school, what type of child care arrangement did you use while you (and your spouse/partner) were at work and/or studying ...structured summer program?

- 1 Yes
- 2 No
- 6 Valid skip
- 7 Don't know
- 8 Refusal
- 9 Not stated

**FACCQ7A – Overnight Camp**

Did this child attend an overnight camp last summer?

- 1 Yes
- 2 No
- 6 Valid skip
- 7 Don't know
- 9 Not stated

**FACCQ8A – Day Camp**

Last summer, did this child attend a day camp or recreational or skill building activity that ran for half days or full days (for example music program, reading program, athletic program)?

- 1 Yes
- 2 No
- 6 Valid skip
- 7 Don't know
- 9 Not stated

**FDMCD05 – Family Structure**

Child lives with:

- 1 Both biological parents
- 2 One biological parent only
- 3 Does not live with a biological parent
- 4 Youth is living independently
- 9 Not stated

**FDMCD08 - Siblings**

Total number of siblings of the selected child living in the household at time of interview (including full, half, step, adopted and foster siblings and excluding the child himself).

This includes siblings of all ages.

*Allowed values:* 00 : 13

00 : 08 Siblings of the child in the household

99 Not stated

**FEDCbQ0 – Type of School**

What type of school is this child currently in ...is it a?

- 01 Public school
- 02 Catholic school, publicly funded
- 03 Private school
- 04 Not in school
- 05 Taught at home (home schooled)
- 06 Child in an institution (for example hospital, young offender facility, child welfare facility)
- 07 Other
- 96 Valid skip
- 99 Not stated

**FRLCQ05 – Negative Peer Social Capital**

How often does this child hang around with kids you think are frequently in trouble?

- 1 Often
- 2 Sometimes
- 3 Seldom
- 4 Never
- 6 Valid skip
- 7 Don't know
- 9 Not stated

**FEDPeD02 – PMK Education Level**

Highest level of schooling obtained

- 1 Less than secondary
- 2 Secondary school graduation
- 3 Some post-secondary
- 4 College or university degree (including trade)
- 5 Other
- 6 Valid skip
- 9 Not stated

**FBECQ6SS – Peer Social Capital**

How often would you say that this child...helps other children (friends, brother or sister) who are feeling sick?

- 1 Never or not true
- 2 Sometimes or somewhat true
- 3 Often or very true
- 6 Valid skip
- 7 Don't know
- 9 Not stated

**FBECQ6U – Peer Social Capital**

How often would you say that this child ...offers to help other children (friend, brother or sister) who are having difficulty with a task?

- 1 Never or not true
- 2 Sometimes or somewhat true
- 3 Often or very true
- 6 Valid skip
- 7 Don't know
- 9 Not stated

**FBECQ6BB – Peer Social Capital**

How often would you say that this child ...comforts a child (friend, brother, or sister) who is crying or upset?

- 1 Never or not true
- 2 Sometimes or somewhat true
- 3 Often or very true
- 6 Valid skip
- 7 Don't know
- 8 Refusal
- 9 Not stated

**FBECQ6OO – Peer Social Capital**

How often would you say that this child...will invite others to join in a game?

- 1 Never or not true
- 2 Sometimes or somewhat true
- 3 Often or very true
- 6 Valid skip
- 7 Don't know
- 9 Not stated

**FINHeQ03 – Household Income**

What is your best estimate of your total household income from all sources in the past 12 months (That is the total income from all household members, before taxes and deductions?)

*Allowed values:* 0000000 : 9999995

0006000 : 0936600 Estimated total household income

9999996 Valid skip

9999999 Not stated

**FSDPD2AA – Citizenship**

Citizenship Status - PMK

- 1 Canadian citizen by birth
- 2 Canadian citizen by naturalization
- 3 Not a Canadian citizen 235 152,678
- 6 Valid skip 26 12,944
- 9 Not stated

**FSDPb4AA – Race**

How would you best describe your race or colour ...White?

1 Yes

2 No

6 Valid skip 26 12,944

9 Not stated

**FSDPb4AB – Race**

How would you best describe your race or colour ...Chinese?

1 Yes

2 No

6 Valid skip

9 Not stated

**FSDPb4AC – Race**

How would you best describe your race or colour ...South Asian (for example East Indian, Pakistani, Punjabi, Sri Lankan)?

1 Yes

2 No

6 Valid skip

9 Not stated

**FSDPb4AD– Race**

How would you best describe your race or colour ...Black (for example African, Haitian, Jamaican, Somali)?

1 Yes

2 No

6 Valid skip

9 Not stated

**FSDPb4AE – Race**

How would you best describe your race or colour ...Native/Aboriginal people (North American Indian, Métis or Inuit/Eskimo)?

1 Yes

2 No

6 Valid skip

9 Not stated

**FSDPb4AF – Race**

How would you best describe your race or colour ...Arab/West Asian (for example Armenian, Egyptian, Iranian, Lebanese, Moroccan)?

1 Yes

2 No

6 Valid skip

9 Not stated

**FSDPb4AG – Race**

How would you best describe your race or colour ...Filipino?

- 1 Yes
- 2 No
- 6 Valid skip
- 9 Not stated

**FSDPb4AH – Race**

How would you best describe your race or colour  
...South East Asian (for example Cambodian, Indonesian, Laotian, Vietnamese)?

- 1 Yes
- 2 No
- 6 Valid skip
- 9 Not stated

**FSDPb4AI– Race**

How would you best describe your race or colour ...Latin American?

- 1 Yes
- 2 No
- 6 Valid skip
- 9 Not stated

**FSDPb4AJ – Race**

How would you best describe your race or colour ...Japanese?

- 1 Yes
- 2 No
- 6 Valid skip
- 9 Not stated

**FSDPb4AK – Race**

How would you best describe your race or colour ...Korean?

- 1 Yes
- 2 No
- 6 Valid skip
- 9 Not stated

**FEDCd11A - Relocation**

Aside from school changes, since the last interview, how many times has this child moved, that is changed his usual place of residence?

*Allowed values:* 00 : 10

- 00 : 10 How many times moved
- 96 Valid skip
- 97 Don't know
- 99 Not stated

**FGEHbD04 – Size of Residence**

Size of area of residence in which the child lives, according to 2001 Census counts.

- 1 Rural area
- 2 Urban, population < 30,000
- 3 Urban, population 30,000 to 99,999
- 4 Urban, population 100,000 to 499,999
- 5 Urban, population 500,000 or over

### Social Capital Variables

[illegible]



## Appendix C

<b>DV :</b> <b>Academic Performance</b>	1= well/very well 2= average 3= poorly/very poorly
<b>IV:</b> <b>Before/after school program</b> <b>Summer structured program</b> <b>Day camp</b> <b>Over night camp</b>	1=yes 0=no
<b>Non-traditional family structure</b>	1=both biological parents 0=other
<b>Number of siblings</b>	1=one sibling 2=two siblings 3=three or more siblings
<b>Type of school attended</b>	1=Catholic 0=other
<b>Around kids who are often in trouble</b>	1=often or not true 2=sometimes or somewhat true 3=often or very true
<b>Peer social capital</b>	Scale ranging from 4-12
<b>Household income</b>	1=<20,000 2=20,200-40,000 3=40, 200 - 60,000 4=60,080-80,000 5=80,008-100,000 6=100,000+
<b>PMK education</b>	1=less than secondary 2=secondary school graduation 3=some post secondary 4=university/college 5=other
<b>Area of residence</b>	1=rural 2=population<30,000 3=30,000-999,999 4=100,000-499,999 5=500,000+
<b>Gender</b>	0=male 1=female
<b>Relocation</b>	0-10 times
<b>Citizenship*</b>	1=Canadian Citizen 1= by naturalization/not Canadian citizen
<b>Race*</b>	0=white 1=other